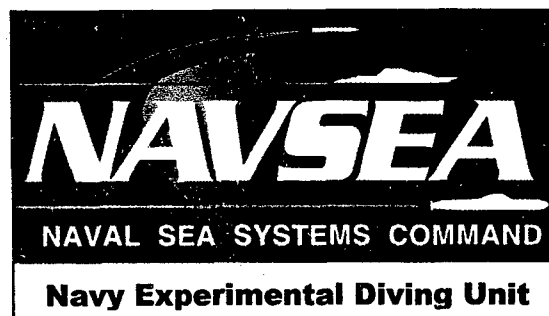


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Evaluation of Sensus Data Logger for Use in Operational Dive Data Collection



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19. ABSTRACT (Continue on reverse if necessary and identify by block number) Naval Sea Systems Command (NAVSEA) tasked the Navy Experimental Diving Unit (NEDU) to identify and evaluate candidate devices that divers can carry to electronically record their depth/time profiles and that can be suitable for collecting operational dive data. One such candidate device, called a data logger (DL) to signify its purpose in logging dive data, is the Sensus (ReefNet Inc.; Mississauga, Ontario). With emphasis on its depth accuracy, NEDU tested the Sensus for use in collecting operational dive data. Thirty DLs were dived twice to a depth of 200 feet of seawater (fsw), with stops at decades of depth on both descent and ascent. Analysis of the results show that all Sensus depth readings appeared to be within the ± 2 fsw depth accuracy desired. The depth readings were also highly reproducible across all DLs and could be corrected to an accuracy of about ± 1 fsw, the accuracy of the test chamber system. The Sensus data logger appears suitable for collecting operational dive data on dives in approximately 200 fsw or shallower.					
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INTRODUCTION

Naval Sea Systems Command (NAVSEA) tasked the Navy Experimental Diving Unit (NEDU) to identify and evaluate candidate devices that, when carried by divers, can electronically record the depth/time profile and be suitable for collecting operational dive data.¹ Such a device is called a data logger (DL), to signify its purpose in logging dive data. The most recently identified candidate DL is the Sensus, manufactured by ReefNet Inc., Mississauga, Ontario. With emphasis on depth accuracy, this report documents how suitable the Sensus is for collecting operational dive data.

The Sensus was identified at the 2001 Diving Equipment Manufacturer's Association (DEMA) Trade Show. This DL, which has an aluminum (6061-T6 alloy) case with external dimensions of 0.9 in x 1.5 in x 2 in, can record depth in 1-fsw intervals to a depth of about 240 fsw. The device normally records 80 hours of diving data, logging depth every 10 seconds and temperature every 60 seconds. However, at NEDU's request, the manufacturer changed the logging rate to 2 seconds for the devices tested. Thus, each DL could log about 16 hours of diving. The battery can be changed by the user and is expected to have an average life of 5-10 years. The device costs \$75,² and the manufacturer also sells the interface connector for communication between the Sensus and a personal computer (PC). The PC software costs nothing, as does the technical information necessary to transfer the dive data from the Sensus to a PC without using the manufacturer-supplied PC software.³

METHODS

Thirty Sensus DLs were purchased and tested with the NAVY Dive Computer standard depth accuracy protocol required for all such dive computers before they are sent to operational units.⁴ This protocol required that the devices be pressed to a depth of 200 fsw in a small, computer-controlled, unmanned test chamber, with stops for about thirty seconds at every decade of depth and for about one minute at each 50-foot depth change on descent and ascent. The devices were submerged in seawater in the chamber, since some can automatically sense the difference between freshwater and saltwater and can adjust the depth measurement accordingly.

Personnel working for R & D Technology Services, Inc. (Panama City, FL), the NEDU data acquisition contractor, performed the unmanned testing at NEDU. The contractor designed and built the small unmanned test chamber used for the testing. This chamber, the MTC #3, has a ten-inch diameter, twelve-inch acrylic tube with steel endplates for the chamber body. The chamber was pressurized by air under computer control. Depth was displayed with Digigauge digital display. Using manufacturer-supplied software, a Tescom ER3000 electronic pressure controller regulator (0-100 psi) was used to adjust the depth of the chamber.

The manufacturer-supplied Sensus Pro Manager 2.1 was used for all PC to DL communications. S-Plus Professional Edition Version 6.0.3 Release 2 for Microsoft Windows (Insightful Corp.; Seattle, WA) was used for all data reduction and statistical

analyses. A fifteen-dollar connector available from the manufacturer was used to connect the Sensus to a PC serial port.

RESULTS

In accordance with the test plan, depth accuracy and reproducibility were measured by pressing all 30 DLs submerged in saltwater in a small unmanned test chamber. This profile was performed two times on 22 October 2002. After the DLs surfaced, profiles were electronically transferred from each DL to a PC for analysis.

During testing in the chamber, the DL pressure port was submerged eleven inches in seawater. Since this depth offset was constant for all DL dives, one fsw was subtracted from the DL depth readings to correct the recorded depths to allow them to be directly compared with the actual depths recorded by the chamber pressure transducer.

The transfer using the manufacturer's software was generally easy, although the transfer had to be retried with three DLs that failed the first transfer.

The overall depth sensor accuracy by decade of depth for each DL is summarized in Appendix A. More detailed descriptive statistics are in Appendix B and Appendix C.

To determine the test-to-test reliability of each DL, its electronically recorded depths were first averaged for each stop depth, as shown in Appendix B. The S-Plus code shown in Appendix D objectively selected the stop depth measurement points.

For Appendix C, each of the stop depth averages was averaged with its counterparts across the two dives. (Normally each DL is tested three times. In this study, however, testing of these DLs was piggybacked with NAVY DC testing that had priority, and only two runs were made due to scheduling conflicts.) Descent and ascent stop depths were considered separately.

Since no significant difference appeared between descent and ascent stop depth measurements, these were averaged together for all runs to give a summary depth accuracy for each decade of depth from 10 to 200 fsw, as shown in Appendix A.

For ease of viewing, the results for five DLs per table are displayed in Appendix A and Appendix C. Note that the far left column for all of the appendices represents the actual depth as measured with an accuracy of ± 1 fsw by the chamber pressure transducer. Also, the initial depth is 10 fsw, because the DL does not start recording the dive profile until a threshold depth of about 5 fsw has been exceeded.

Table 1 summarizes the data of Appendix B to show the overall average depth error, maximum depth error, average standard deviation, and maximum standard deviation for each DL. Depth error is defined as the absolute difference between the actual DC reading and the stop depth, as measured by the chamber pressure transducer. The average standard deviation in the table is defined as the mean of the reported standard

deviations for a given DL in Appendix B. The maximum average depth error was 1.6 fsw.

Table 1. Averaged (avg) and maximum (max) depth errors and standard deviations (SD) by DL. All values are in fsw.

DC	Avg Depth Error	Max Depth Error	Avg SD	Max SD
S-28690	0.4	1.0	0.0	0.5
S-28701	0.4	1.1	0.1	0.5
S-28732	0.3	1.0	0.1	0.5
S-28733	0.4	1.1	0.1	0.5
S-28734	0.4	1.1	0.1	0.5
S-28770	0.4	1.0	0.1	0.5
S-28771	0.4	1.0	0.1	0.5
S-28772	0.4	1.0	0.1	0.5
S-28773	0.4	1.0	0.1	0.5
S-28774	0.4	1.0	0.1	0.5
S-38682	0.5	1.0	0.1	0.5
S-38687	0.4	1.1	0.1	0.5
S-38692	0.5	1.1	0.1	0.5
S-38695	0.4	1.1	0.1	0.5
S-38696	0.5	1.0	0.1	0.5
S-38697	0.3	1.0	0.1	0.5
S-38699	0.4	1.0	0.1	0.5
S-38704	0.5	1.1	0.1	0.5
S-38707	0.5	1.1	0.1	0.5
S-38716	0.4	1.0	0.1	0.5
S-38719	0.5	1.0	0.1	0.5
S-38727	0.5	1.1	0.1	0.5
S-38730	0.4	1.0	0.1	0.5
S-38733	0.3	1.0	0.1	0.5
S-38734	0.6	1.0	0.1	0.5
S-38738	0.5	1.0	0.1	0.5
S-38740	0.5	1.0	0.1	0.5
S-38748	0.4	1.1	0.1	0.5
S-38749	0.4	1.0	0.0	0.5
S-38753	0.4	1.1	0.1	0.5

To determine the relationship between the actual depth and the DL readings, a linear regression analysis was performed with the data from the 200-fsw depth accuracy runs. For each DL, the depth averages at each decade of depth for all runs were regressed against actual depth using the linear model:

$$\text{Actual Depth} = \text{Intercept} + \text{DL depth} * \text{Slope}$$

Actual Depth is the depth measured by the unmanned chamber pressure transducer; DL depth is the average depth recorded by each DL at a depth stop. Intercept and Slope are the coefficients fitted in the linear regression model. The R^2 values indicate

that the linear models explain at least 99.99% of the variation in the data. The linearity of the depth readings is satisfactory for all DLs. (A perfectly linear relationship between actual depth and DL depth would have an R^2 of one.) The results of the regressions are shown in Table 2.

Table 2. Linear regression coefficients and R^2 values optimized for each data logger by the linear model:

$$\text{Actual depth} = \text{Intercept} + \text{DL depth} * \text{Slope}.$$

Data Logger	Intercept	Slope	Regression R^2
S-28690	-0.941	1.006	0.9999
S-28701	-0.846	1.004	1.0000
S-28732	-0.663	1.004	1.0000
S-28733	-0.856	1.004	0.9999
S-28734	-0.917	1.006	0.9999
S-28770	-0.845	1.005	0.9999
S-28771	-0.818	1.004	0.9999
S-28772	-0.883	1.004	0.9999
S-28773	-0.812	1.004	0.9999
S-28774	-0.776	1.004	1.0000
S-38682	-0.938	1.005	1.0000
S-38687	-0.881	1.005	1.0000
S-38692	-0.791	1.003	0.9999
S-38695	-0.847	1.004	0.9999
S-38696	-0.873	1.004	0.9999
S-38697	-0.670	1.005	0.9999
S-38699	-0.803	1.003	0.9999
S-38704	-0.948	1.004	0.9999
S-38707	-0.949	1.004	0.9999
S-38716	-0.786	1.004	0.9999
S-38719	-0.803	1.003	0.9999
S-38727	-0.861	1.004	0.9999
S-38730	-0.738	1.003	0.9999
S-38733	-0.743	1.005	0.9999
S-38734	-1.023	1.004	1.0000
S-38738	-0.908	1.004	0.9999
S-38740	-0.958	1.005	1.0000
S-38748	-0.798	1.004	0.9999
S-38749	-0.904	1.005	1.0000
S-38753	-0.948	1.006	0.9999

DISCUSSION

Sensus depth readings were within the ± 2 fsw depth accuracy desired. They are also highly reproducible across all DLs and can be corrected to an accuracy of about ± 1 fsw, the accuracy of the test chamber system.

The aluminum alloy case may make the Sensus DL more useful than the NAVY Dive Computer (with its plastic case) for diving in contaminated water, since the aluminum case should be more resistant to the in-water contaminants than the plastic case.

Using the DLs caused no real problems other than the minor distraction of having to repeat the data transfer process once for each of three DLs. These retries may have resulted from an inadequate connection between the DL and the PC.

However, the testing revealed two potential concerns. The first is that the Sensus contains a 32-bit counter to track the time. This counter starts when the battery is placed in the DL, and increments every second. The DL dive log includes the device on-time at the start of the dive. The date and time of the dive are obtained by first subtracting the current device on-time in seconds from the current date/time of the PC used to download the DL data. This procedure provides a correction that is then applied to the device on-time logged in the dive record to give the date and time of the dive. A problem can arise when the data are downloaded more than once on either the same or different PCs. If the PCs have different date/time settings, then it is possible for a dive profile to be downloaded more than once but to appear to have been dived at different times. This potential error can be minimized by ensuring that the PC clock is set to the proper time and time zone while using the DLs.

The second potential concern is that, according to the *Sensus Developer's Guide*, if communication difficulties occur between the DL and the PC, the DL might not respond to any further commands until its battery is removed. Since removal of the battery resets the DL clock, recent dives may appear to have happened before some of those already archived. Recording the time of such failures might minimize the confusion. Since nonvolatile flash memory is used to store the dive data, the dive profiles should not be lost.

Both potential concerns can be obviated and are not severe enough to reject the use of the Sensus DL for operational dive data collection.

CONCLUSION

The Sensus data logger appears suitable for operational dive data collection and is recommended for logging of dives approximately 200 fsw or shallower.

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1. Commander, Naval Sea Systems Command, *Task Assignment 01-21: Electronic Operational Dive Data Collection*, October 2001.
2. *ReefNet Catalog* (Mississauga, Ontario: ReefNet Inc., 2001/2002).
3. *Sensus Developer's Guide* (Mississauga, Ontario: ReefNet Inc., September 17, 2001).
4. Southerland, DG. *Unmanned Dive Computer Verification*, NEDU TP 01-22, Navy Experimental Diving Unit, November 2001.

APPENDIX A

OVERALL DEPTH ACCURACY STATISTICS

This appendix contains summary depth averages for the thirty Sensus data logger (DL) devices tested at NEDU. Each depth average (plus standard deviation) was calculated by averaging, for a given DL and depth, the depth averages listed in Appendix B for both the two runs and the descent and ascent stops.

For readability, the tables are broken into groups of five DLs.

Table A-1. Overall average depth \pm S.D. by decade of depth for data loggers whose serial numbers comprise column headings 2-5. The first column (Depth) is the true depth. All depths are in fsw.

Depth	S-28690	S-28701	S-28732	S-28733	S-28734
10	10.5 \pm 0.6	10.5 \pm 0.6	10.2 \pm 0.3	10.5 \pm 0.5	10.4 \pm 0.5
20	20.5 \pm 0.6	20.5 \pm 0.5	20.3 \pm 0.4	20.5 \pm 0.5	20.4 \pm 0.5
30	30.8 \pm 0.2	30.6 \pm 0.4	30.5 \pm 0.5	30.9 \pm 0.1	30.7 \pm 0.3
40	41.0 \pm 0.0	41.0 \pm 0.1	40.6 \pm 0.5	41.0 \pm 0.1	40.8 \pm 0.2
50	51.0 \pm 0.0	51.0 \pm 0.0	50.9 \pm 0.1	51.0 \pm 0.0	51.0 \pm 0.1
60	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.1	60.0 \pm 0.0	60.0 \pm 0.0
70	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0
80	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0
90	90.5 \pm 0.6	90.5 \pm 0.6	90.5 \pm 0.6	90.5 \pm 0.6	90.3 \pm 0.5
100	100.5 \pm 0.6	100.5 \pm 0.6	100.2 \pm 0.4	100.5 \pm 0.6	100.4 \pm 0.5
110	110.5 \pm 0.6	110.5 \pm 0.5	110.0 \pm 0.1	110.5 \pm 0.6	110.3 \pm 0.4
120	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.1	120.0 \pm 0.0
130	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0
140	140.0 \pm 0.0	140.0 \pm 0.0	140.0 \pm 0.0	140.0 \pm 0.0	140.0 \pm 0.0
150	150.0 \pm 0.0	150.0 \pm 0.0	150.0 \pm 0.0	150.1 \pm 0.2	150.0 \pm 0.0
160	160.0 \pm 0.0	160.0 \pm 0.0	159.9 \pm 0.2	160.0 \pm 0.0	159.7 \pm 0.4
170	170.0 \pm 0.1	170.1 \pm 0.2	169.8 \pm 0.3	170.4 \pm 0.5	169.5 \pm 0.6
180	180.1 \pm 0.2	180.3 \pm 0.3	180.1 \pm 0.2	180.3 \pm 0.4	180.0 \pm 0.0
190	189.6 \pm 0.5	190.1 \pm 0.1	189.9 \pm 0.1	190.0 \pm 0.1	189.6 \pm 0.5
200	200.0 \pm 0.0	200.0 \pm 0.0	199.9 \pm 0.1	200.0 \pm 0.0	199.6 \pm 0.6

Table A-2. Overall average depth \pm S.D. by decade of depth for data loggers whose serial numbers comprise column headings 2-5. The first column (Depth) is the true depth. All depths are in fsw.

Depth	S-28770	S-28771	S-28772	S-28773	S-28774
10	10.4 \pm 0.5	10.5 \pm 0.5	10.5 \pm 0.5	10.2 \pm 0.4	10.4 \pm 0.5
20	20.5 \pm 0.6	20.5 \pm 0.6	20.5 \pm 0.5	20.5 \pm 0.6	20.4 \pm 0.5
30	30.5 \pm 0.5	30.8 \pm 0.2	31.0 \pm 0.1	30.8 \pm 0.3	30.5 \pm 0.5
40	40.9 \pm 0.2	41.0 \pm 0.1	41.0 \pm 0.0	41.0 \pm 0.0	40.9 \pm 0.1
50	51.0 \pm 0.1	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.1
60	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.0
70	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0
80	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0
90	90.5 \pm 0.6	90.6 \pm 0.5	90.5 \pm 0.6	90.5 \pm 0.6	90.5 \pm 0.6
100	100.5 \pm 0.6	100.5 \pm 0.6	100.5 \pm 0.6	100.5 \pm 0.6	100.5 \pm 0.6
110	110.5 \pm 0.6	110.5 \pm 0.6	110.5 \pm 0.6	110.5 \pm 0.6	110.5 \pm 0.5
120	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0
130	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0
140	140.0 \pm 0.1	140.0 \pm 0.0	140.0 \pm 0.1	140.0 \pm 0.0	140.0 \pm 0.1
150	150.0 \pm 0.0	150.2 \pm 0.3	150.2 \pm 0.2	150.1 \pm 0.2	150.0 \pm 0.0
160	159.9 \pm 0.3	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0
170	170.0 \pm 0.0	170.5 \pm 0.6	170.3 \pm 0.5	170.0 \pm 0.0	170.3 \pm 0.4
180	180.0 \pm 0.0	180.5 \pm 0.5	180.4 \pm 0.5	180.4 \pm 0.4	180.1 \pm 0.1
190	189.7 \pm 0.3	190.0 \pm 0.0	190.0 \pm 0.0	190.0 \pm 0.0	189.9 \pm 0.2
200	200.0 \pm 0.0	200.0 \pm 0.0	200.0 \pm 0.0	200.0 \pm 0.0	200.0 \pm 0.0

Table A-3. Overall average depth \pm S.D. by decade of depth for data loggers whose serial numbers comprise column headings 2-5. The first column (Depth) is the true depth. All depths are in fsw.

Depth	S-38682	S-38687	S-38692	S-38695	S-38696
10	10.5 \pm 0.5	10.4 \pm 0.5	10.4 \pm 0.5	10.4 \pm 0.5	10.5 \pm 0.6
20	20.8 \pm 0.2	20.5 \pm 0.6	20.5 \pm 0.6	20.5 \pm 0.5	20.5 \pm 0.5
30	30.9 \pm 0.2	30.8 \pm 0.2	30.6 \pm 0.5	30.9 \pm 0.2	31.0 \pm 0.1
40	41.0 \pm 0.0	41.0 \pm 0.1	41.0 \pm 0.0	41.0 \pm 0.0	41.0 \pm 0.0
50	51.0 \pm 0.0	51.0 \pm 0.1	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0
60	60.0 \pm 0.0	60.0 \pm 0.0	60.2 \pm 0.3	60.0 \pm 0.0	60.0 \pm 0.0
70	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0
80	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.1	81.0 \pm 0.0
90	90.6 \pm 0.5	90.5 \pm 0.6	90.6 \pm 0.5	90.5 \pm 0.6	90.6 \pm 0.5
100	100.7 \pm 0.4	100.5 \pm 0.6	100.6 \pm 0.5	100.5 \pm 0.6	100.6 \pm 0.5
110	110.5 \pm 0.6	110.5 \pm 0.6	110.6 \pm 0.5	110.5 \pm 0.6	110.5 \pm 0.6
120	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0
130	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.1	130.0 \pm 0.1
140	140.0 \pm 0.1	140.1 \pm 0.2	140.3 \pm 0.4	140.0 \pm 0.0	140.2 \pm 0.3
150	150.0 \pm 0.1	150.0 \pm 0.0	150.5 \pm 0.5	150.0 \pm 0.1	150.2 \pm 0.4
160	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0
170	170.4 \pm 0.5	170.0 \pm 0.2	170.6 \pm 0.6	170.3 \pm 0.4	170.5 \pm 0.6
180	180.5 \pm 0.6	180.2 \pm 0.2	180.5 \pm 0.6	180.3 \pm 0.5	180.5 \pm 0.6
190	190.0 \pm 0.0	190.0 \pm 0.0	190.0 \pm 0.0	190.0 \pm 0.0	190.0 \pm 0.0
200	200.0 \pm 0.0	200.0 \pm 0.0	200.0 \pm 0.0	200.0 \pm 0.0	200.0 \pm 0.0

Table A-4. Overall average depth \pm S.D. by decade of depth for data loggers whose serial numbers comprise column headings 2-5. The first column (Depth) is the true depth. All depths are in fsw.

Depth	S-38697	S-38699	S-38704	S-38707	S-38716
10	10.3 \pm 0.4	10.5 \pm 0.5	10.5 \pm 0.6	10.6 \pm 0.5	10.4 \pm 0.5
20	20.2 \pm 0.2	20.4 \pm 0.5	20.6 \pm 0.4	20.7 \pm 0.4	20.4 \pm 0.5
30	30.5 \pm 0.5	30.7 \pm 0.4	30.9 \pm 0.1	31.0 \pm 0.0	30.5 \pm 0.5
40	40.6 \pm 0.5	41.0 \pm 0.1	41.0 \pm 0.1	41.0 \pm 0.0	40.9 \pm 0.1
50	50.7 \pm 0.5	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.1
60	60.0 \pm 0.0	60.0 \pm 0.0	60.3 \pm 0.3	60.2 \pm 0.5	60.0 \pm 0.0
70	70.9 \pm 0.2	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.1	71.0 \pm 0.0
80	81.0 \pm 0.1	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0
90	90.0 \pm 0.0	90.5 \pm 0.6	90.8 \pm 0.2	90.5 \pm 0.6	90.5 \pm 0.6
100	100.0 \pm 0.0	100.5 \pm 0.6	100.8 \pm 0.2	100.6 \pm 0.5	100.5 \pm 0.6
110	110.0 \pm 0.0	110.6 \pm 0.5	110.5 \pm 0.5	110.5 \pm 0.6	110.5 \pm 0.6
120	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0
130	130.0 \pm 0.0	130.0 \pm 0.1	130.1 \pm 0.2	130.0 \pm 0.0	130.0 \pm 0.0
140	140.0 \pm 0.0	140.3 \pm 0.5	140.5 \pm 0.6	140.3 \pm 0.4	140.0 \pm 0.0
150	150.0 \pm 0.0	150.2 \pm 0.3	150.5 \pm 0.6	150.1 \pm 0.2	150.0 \pm 0.0
160	159.5 \pm 0.6	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0	159.9 \pm 0.1
170	169.5 \pm 0.5	170.5 \pm 0.6	170.5 \pm 0.6	170.5 \pm 0.6	170.0 \pm 0.4
180	180.0 \pm 0.0	180.5 \pm 0.6	180.5 \pm 0.5	180.5 \pm 0.6	180.2 \pm 0.4
190	189.5 \pm 0.6	190.0 \pm 0.0	190.0 \pm 0.0	190.0 \pm 0.1	190.0 \pm 0.0
200	199.5 \pm 0.7	200.0 \pm 0.0	200.0 \pm 0.0	200.0 \pm 0.0	200.0 \pm 0.0

Table A-5. Overall average depth \pm S.D. by decade of depth for data loggers whose serial numbers comprise column headings 2-5. The first column (Depth) is the true depth. All depths are in fsw.

Depth	S-38719	S-38727	S-38730	S-38733	S-38734
10	10.4 \pm 0.5	10.4 \pm 0.5	10.4 \pm 0.5	10.0 \pm 0.0	10.5 \pm 0.5
20	20.5 \pm 0.5	20.6 \pm 0.5	20.4 \pm 0.5	20.4 \pm 0.5	21.0 \pm 0.1
30	30.9 \pm 0.2	30.9 \pm 0.1	30.6 \pm 0.5	30.8 \pm 0.3	31.0 \pm 0.0
40	41.0 \pm 0.0	41.0 \pm 0.0	40.8 \pm 0.2	40.6 \pm 0.5	41.0 \pm 0.0
50	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0	50.8 \pm 0.3	51.0 \pm 0.0
60	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.0	60.3 \pm 0.4
70	71.0 \pm 0.0	71.0 \pm 0.1	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0
80	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0
90	90.5 \pm 0.6	90.6 \pm 0.5	90.5 \pm 0.6	90.5 \pm 0.6	90.8 \pm 0.3
100	100.7 \pm 0.4	100.6 \pm 0.5	100.5 \pm 0.6	100.4 \pm 0.5	100.9 \pm 0.1
110	110.5 \pm 0.6	110.5 \pm 0.6	110.5 \pm 0.6	110.3 \pm 0.3	110.5 \pm 0.5
120	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0
130	130.0 \pm 0.0	130.0 \pm 0.1	130.0 \pm 0.0	130.0 \pm 0.0	130.1 \pm 0.2
140	140.4 \pm 0.4	140.1 \pm 0.2	140.1 \pm 0.1	140.0 \pm 0.1	140.4 \pm 0.5
150	150.5 \pm 0.6	150.3 \pm 0.4	150.2 \pm 0.3	150.0 \pm 0.0	150.5 \pm 0.6
160	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0	159.7 \pm 0.3	160.0 \pm 0.0
170	170.5 \pm 0.6	170.5 \pm 0.5	170.5 \pm 0.6	169.8 \pm 0.3	170.5 \pm 0.6
180	180.5 \pm 0.6	180.5 \pm 0.6	180.4 \pm 0.5	180.0 \pm 0.1	180.5 \pm 0.6
190	190.0 \pm 0.0	190.0 \pm 0.0	190.0 \pm 0.0	189.6 \pm 0.5	190.0 \pm 0.0
200	200.2 \pm 0.3	200.0 \pm 0.0	200.0 \pm 0.0	200.0 \pm 0.0	200.0 \pm 0.0

Table A-6. Overall average depth \pm S.D. by decade of depth for data loggers whose serial numbers comprise column headings 2-5. The first column (Depth) is the true depth. All depths are in fsw.

Depth	S-38738	S-38740	S-38748	S-38749	S-38753
10	10.5 \pm 0.5	10.6 \pm 0.4	10.5 \pm 0.5	10.5 \pm 0.6	10.5 \pm 0.5
20	20.8 \pm 0.5	20.8 \pm 0.3	20.6 \pm 0.5	20.5 \pm 0.5	20.5 \pm 0.5
30	30.9 \pm 0.1	31.0 \pm 0.1	30.6 \pm 0.5	30.9 \pm 0.2	30.9 \pm 0.2
40	41.0 \pm 0.0	41.0 \pm 0.0	40.9 \pm 0.1	41.0 \pm 0.0	41.0 \pm 0.1
50	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0
60	60.2 \pm 0.3	60.1 \pm 0.1	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.0
70	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0
80	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0
90	90.6 \pm 0.5	90.5 \pm 0.6	90.5 \pm 0.6	90.5 \pm 0.6	90.5 \pm 0.6
100	100.6 \pm 0.5	100.5 \pm 0.6	100.5 \pm 0.6	100.5 \pm 0.6	100.5 \pm 0.6
110	110.5 \pm 0.6	110.5 \pm 0.6	110.5 \pm 0.6	110.5 \pm 0.6	110.3 \pm 0.4
120	120.0 \pm 0.1	120.0 \pm 0.1	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0
130	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0
140	140.4 \pm 0.4	140.0 \pm 0.0	140.0 \pm 0.0	140.0 \pm 0.0	140.0 \pm 0.1
150	150.3 \pm 0.3	150.2 \pm 0.2	150.1 \pm 0.2	150.0 \pm 0.0	150.0 \pm 0.0
160	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0	159.8 \pm 0.4
170	170.5 \pm 0.5	170.4 \pm 0.5	170.5 \pm 0.5	170.0 \pm 0.1	169.7 \pm 0.4
180	180.5 \pm 0.6	180.5 \pm 0.6	180.4 \pm 0.5	180.2 \pm 0.3	180.1 \pm 0.1
190	190.0 \pm 0.1	190.0 \pm 0.1	190.0 \pm 0.0	190.0 \pm 0.0	189.9 \pm 0.2
200	200.0 \pm 0.0	200.0 \pm 0.0	200.0 \pm 0.0	200.0 \pm 0.0	199.7 \pm 0.5

Appendix B

DEPTH ACCURACY DESCRIPTIVE STATISTICS

The following twenty-two tables show the summary statistics obtained during the depth accuracy testing for each data logger. The **Actual Depth** is the chamber depth in fsw as measured by the chamber apparatus. Chamber depth absolute accuracy error was ± 1 fsw. **Run #** identifies which of the sequential dives performed by a particular data logger was used to generate the results for that row. **Avg Depth \pm SD** gives the average depth and standard deviation for the samples comprising the depth stop for that row. **Min** and **Max** are the minimum and maximum values of all of the samples for the row's stop depth. **# of Samples** is the number of data samples (points) which make up the measured depth stop. These samples were contiguous and were logged every two seconds.

Sensus S-28690

Actual Depth	Run #	Avg Depth \pm SD	Min Depth	Max Depth	# of Samples
10	1	11.0 \pm 0.0	11	11	15
10	2	10.0 \pm 0.0	10	10	15
20	1	21.0 \pm 0.0	21	21	16
20	2	20.0 \pm 0.0	20	20	15
30	1	31.0 \pm 0.0	31	31	16
30	2	30.6 \pm 0.5	30	31	16
40	1	41.0 \pm 0.0	41	41	15
40	2	41.0 \pm 0.0	41	41	15
50	1	51.0 \pm 0.0	51	51	30
50	2	51.0 \pm 0.0	51	51	30
60	1	60.0 \pm 0.0	60	60	15
60	2	60.0 \pm 0.0	60	60	15
70	1	71.0 \pm 0.0	71	71	15
70	2	71.0 \pm 0.0	71	71	15
80	1	81.0 \pm 0.0	81	81	15
80	2	81.0 \pm 0.0	81	81	15
90	1	91.0 \pm 0.0	91	91	15
90	2	90.0 \pm 0.0	90	90	15
100	1	101.0 \pm 0.0	101	101	30
100	2	100.0 \pm 0.0	100	100	30
110	1	111.0 \pm 0.0	111	111	15
110	2	110.0 \pm 0.0	110	110	16
120	1	120.0 \pm 0.0	120	120	16

Sensus S-28690 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
120	2	120.0 ± 0.0	120	120	16
130	1	130.0 ± 0.0	130	130	15
130	2	130.0 ± 0.0	130	130	15
140	1	140.0 ± 0.0	140	140	15
140	2	140.0 ± 0.0	140	140	15
150	1	150.0 ± 0.0	150	150	30
150	2	150.0 ± 0.0	150	150	31
160	1	160.0 ± 0.0	160	160	15
160	2	160.0 ± 0.0	160	160	15
170	1	170.1 ± 0.3	170	171	15
170	2	170.0 ± 0.0	170	170	15
180	1	180.4 ± 0.5	180	181	16
180	2	180.0 ± 0.0	180	180	15
190	1	190.0 ± 0.0	190	190	15
190	2	189.3 ± 0.5	189	190	14
200	1	200.0 ± 0.0	200	200	30
200	2	200.0 ± 0.0	200	200	30
190	1	190.0 ± 0.0	190	190	16
190	2	189.0 ± 0.0	189	189	16
180	1	180.0 ± 0.0	180	180	16
180	2	180.0 ± 0.0	180	180	16
170	1	170.0 ± 0.0	170	170	16
170	2	169.9 ± 0.2	169	170	16
160	1	160.0 ± 0.0	160	160	16
160	2	160.0 ± 0.0	160	160	16
150	1	150.1 ± 0.2	150	151	33
150	2	150.1 ± 0.2	150	151	33
140	1	140.0 ± 0.0	140	140	16
140	2	140.0 ± 0.0	140	140	16
130	1	130.0 ± 0.0	130	130	16
130	2	130.0 ± 0.0	130	130	16
120	1	120.0 ± 0.0	120	120	17
120	2	120.0 ± 0.0	120	120	17
110	1	111.0 ± 0.0	111	111	16
110	2	110.0 ± 0.0	110	110	16
100	1	101.0 ± 0.0	101	101	31
100	2	100.0 ± 0.0	100	100	32
90	1	91.0 ± 0.0	91	91	17
90	2	90.0 ± 0.0	90	90	17
80	1	81.0 ± 0.0	81	81	16
80	2	81.0 ± 0.0	81	81	17
70	1	71.0 ± 0.0	71	71	16
70	2	71.0 ± 0.0	71	71	16
60	1	60.1 ± 0.3	60	61	15
60	2	60.0 ± 0.0	60	60	16
50	1	51.0 ± 0.0	51	51	32

Sensus S-28690 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
50	2	51.0 ± 0.0	51	51	31
40	1	41.0 ± 0.0	41	41	16
40	2	41.0 ± 0.0	41	41	16
30	1	31.0 ± 0.0	31	31	16
30	2	30.7 ± 0.5	30	31	16
20	1	21.0 ± 0.0	21	21	16
20	2	20.0 ± 0.0	20	20	17
10	1	11.0 ± 0.0	11	11	16
10	2	10.0 ± 0.0	10	10	17

Sensus S-28701

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
10	1	11.0 ± 0.0	11	11	14
10	2	10.0 ± 0.0	10	10	15
20	1	21.0 ± 0.0	21	21	15
20	2	20.0 ± 0.0	20	20	16
30	1	31.0 ± 0.0	31	31	15
30	2	30.1 ± 0.4	30	31	15
40	1	41.0 ± 0.0	41	41	15
40	2	41.0 ± 0.0	41	41	16
50	1	51.0 ± 0.0	51	51	31
50	2	51.0 ± 0.0	51	51	30
60	1	60.1 ± 0.3	60	61	15
60	2	60.0 ± 0.0	60	60	15
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	15
80	1	81.0 ± 0.0	81	81	15
80	2	81.0 ± 0.0	81	81	15
90	1	91.0 ± 0.0	91	91	16
90	2	90.0 ± 0.0	90	90	15
100	1	101.0 ± 0.0	101	101	31
100	2	100.0 ± 0.0	100	100	31
110	1	110.9 ± 0.3	110	111	16
110	2	110.0 ± 0.0	110	110	15
120	1	120.0 ± 0.0	120	120	16
120	2	120.0 ± 0.0	120	120	15
130	1	130.0 ± 0.0	130	130	15
130	2	130.0 ± 0.0	130	130	15
140	1	140.0 ± 0.0	140	140	15
140	2	140.0 ± 0.0	140	140	16
150	1	150.1 ± 0.3	150	151	30
150	2	150.0 ± 0.0	150	150	30
160	1	160.0 ± 0.0	160	160	15
160	2	160.0 ± 0.0	160	160	15
170	1	170.4 ± 0.5	170	171	15
170	2	170.0 ± 0.0	170	170	15
180	1	180.7 ± 0.5	180	181	15
180	2	180.0 ± 0.0	180	180	15
190	1	190.0 ± 0.0	190	190	15
190	2	190.0 ± 0.0	190	190	15
200	1	200.0 ± 0.0	200	200	31
200	2	200.0 ± 0.0	200	200	31
190	1	190.1 ± 0.3	190	191	18
190	2	190.1 ± 0.3	190	191	18

Sensus S-28701 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	180.3 ± 0.5	180	181	16
180	2	180.0 ± 0.0	180	180	17
170	1	170.0 ± 0.0	170	170	16
170	2	170.0 ± 0.0	170	170	16
160	1	160.0 ± 0.0	160	160	17
160	2	160.0 ± 0.0	160	160	17
150	1	150.0 ± 0.0	150	150	31
150	2	150.0 ± 0.0	150	150	31
140	1	140.0 ± 0.0	140	140	16
140	2	140.0 ± 0.0	140	140	17
130	1	130.0 ± 0.0	130	130	17
130	2	130.0 ± 0.0	130	130	17
120	1	120.0 ± 0.0	120	120	17
120	2	120.0 ± 0.0	120	120	17
110	1	111.0 ± 0.0	111	111	17
110	2	110.0 ± 0.0	110	110	17
100	1	101.0 ± 0.0	101	101	32
100	2	100.0 ± 0.0	100	100	32
90	1	91.1 ± 0.3	91	92	18
90	2	90.0 ± 0.0	90	90	16
80	1	81.0 ± 0.0	81	81	17
80	2	81.0 ± 0.0	81	81	17
70	1	71.0 ± 0.0	71	71	16
70	2	71.0 ± 0.0	71	71	16
60	1	60.0 ± 0.0	60	60	16
60	2	60.0 ± 0.0	60	60	17
50	1	51.0 ± 0.0	51	51	31
50	2	51.0 ± 0.0	51	51	31
40	1	41.0 ± 0.0	41	41	16
40	2	40.9 ± 0.3	40	41	16
30	1	31.0 ± 0.0	31	31	16
30	2	30.4 ± 0.5	30	31	16
20	1	20.9 ± 0.2	20	21	16
20	2	20.2 ± 0.4	20	21	18
10	1	10.9 ± 0.3	10	11	15
10	2	10.0 ± 0.0	10	10	16

Sensus S-28732

Actual Depth	Run #	Avg Depth \pm SD	Min Depth	Max Depth	# of Samples
10	1	10.2 \pm 0.4	10	11	15
10	2	10.0 \pm 0.0	10	10	15
20	1	20.9 \pm 0.4	20	21	15
20	2	20.0 \pm 0.0	20	20	16
30	1	31.0 \pm 0.0	31	31	15
30	2	30.0 \pm 0.0	30	30	15
40	1	41.0 \pm 0.0	41	41	15
40	2	40.3 \pm 0.5	40	41	15
50	1	51.0 \pm 0.0	51	51	31
50	2	50.9 \pm 0.3	50	51	30
60	1	60.0 \pm 0.0	60	60	15
60	2	60.0 \pm 0.0	60	60	15
70	1	71.0 \pm 0.0	71	71	15
70	2	71.0 \pm 0.0	71	71	15
80	1	81.0 \pm 0.0	81	81	15
80	2	81.0 \pm 0.0	81	81	15
90	1	91.0 \pm 0.0	91	91	16
90	2	90.0 \pm 0.0	90	90	15
100	1	100.8 \pm 0.4	100	101	30
100	2	100.0 \pm 0.0	100	100	31
110	1	110.1 \pm 0.3	110	111	16
110	2	110.0 \pm 0.0	110	110	15
120	1	120.0 \pm 0.0	120	120	15
120	2	120.0 \pm 0.0	120	120	15
130	1	130.0 \pm 0.0	130	130	15
130	2	130.0 \pm 0.0	130	130	15
140	1	140.0 \pm 0.0	140	140	15
140	2	140.0 \pm 0.0	140	140	15
150	1	150.0 \pm 0.0	150	150	31
150	2	150.0 \pm 0.0	150	150	30
160	1	160.0 \pm 0.0	160	160	15
160	2	160.0 \pm 0.0	160	160	15
170	1	170.0 \pm 0.0	170	170	15
170	2	169.6 \pm 0.5	169	170	14
180	1	180.4 \pm 0.5	180	181	15
180	2	180.0 \pm 0.0	180	180	15
190	1	190.0 \pm 0.0	190	190	15
190	2	189.7 \pm 0.5	189	190	15
200	1	200.0 \pm 0.0	200	200	31
200	2	199.8 \pm 0.4	199	200	31
190	1	190.0 \pm 0.0	190	190	17
190	2	189.8 \pm 0.4	189	190	17

Sensus S-28732 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	180.0 ± 0.0	180	180	16
180	2	180.0 ± 0.0	180	180	17
170	1	170.0 ± 0.0	170	170	16
170	2	169.4 ± 0.5	169	170	16
160	1	160.0 ± 0.0	160	160	16
160	2	159.5 ± 0.5	159	160	16
150	1	150.0 ± 0.0	150	150	31
150	2	150.0 ± 0.0	150	150	31
140	1	140.0 ± 0.0	140	140	16
140	2	140.0 ± 0.0	140	140	16
130	1	130.0 ± 0.0	130	130	16
130	2	130.0 ± 0.0	130	130	17
120	1	120.0 ± 0.0	120	120	17
120	2	120.0 ± 0.0	120	120	17
110	1	110.0 ± 0.0	110	110	16
110	2	110.0 ± 0.0	110	110	17
100	1	100.2 ± 0.4	100	101	31
100	2	100.0 ± 0.0	100	100	32
90	1	90.9 ± 0.2	90	91	17
90	2	90.0 ± 0.0	90	90	16
80	1	81.0 ± 0.0	81	81	17
80	2	81.0 ± 0.0	81	81	17
70	1	71.0 ± 0.0	71	71	16
70	2	71.0 ± 0.0	71	71	16
60	1	60.0 ± 0.0	60	60	16
60	2	59.9 ± 0.3	59	60	18
50	1	51.0 ± 0.0	51	51	31
50	2	50.9 ± 0.3	50	51	30
40	1	41.0 ± 0.0	41	41	16
40	2	40.1 ± 0.2	40	41	16
30	1	30.9 ± 0.4	30	31	15
30	2	30.0 ± 0.0	30	30	17
20	1	20.4 ± 0.5	20	21	16
20	2	20.0 ± 0.0	20	20	17
10	1	10.5 ± 0.5	10	11	15
10	2	10.0 ± 0.0	10	10	16

Sensus S-28733

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
10	1	11.0 ± 0.0	11	11	15
10	2	10.0 ± 0.0	10	10	15
20	1	21.0 ± 0.0	21	21	15
20	2	20.1 ± 0.2	20	21	16
30	1	31.0 ± 0.0	31	31	15
30	2	30.9 ± 0.3	30	31	15
40	1	41.0 ± 0.0	41	41	15
40	2	41.0 ± 0.0	41	41	16
50	1	51.0 ± 0.0	51	51	30
50	2	51.0 ± 0.0	51	51	31
60	1	60.0 ± 0.0	60	60	15
60	2	60.0 ± 0.0	60	60	15
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	15
80	1	81.0 ± 0.0	81	81	15
80	2	81.0 ± 0.0	81	81	15
90	1	91.0 ± 0.0	91	91	16
90	2	90.0 ± 0.0	90	90	15
100	1	101.0 ± 0.0	101	101	31
100	2	100.0 ± 0.0	100	100	31
110	1	111.0 ± 0.0	111	111	15
110	2	110.0 ± 0.0	110	110	15
120	1	120.0 ± 0.0	120	120	16
120	2	120.0 ± 0.0	120	120	15
130	1	130.0 ± 0.0	130	130	15
130	2	130.0 ± 0.0	130	130	15
140	1	140.0 ± 0.0	140	140	15
140	2	140.0 ± 0.0	140	140	16
150	1	150.4 ± 0.5	150	151	30
150	2	150.0 ± 0.0	150	150	30
160	1	160.0 ± 0.0	160	160	15
160	2	160.0 ± 0.0	160	160	15
170	1	171.0 ± 0.0	171	171	15
170	2	170.0 ± 0.0	170	170	15
180	1	180.8 ± 0.4	180	181	15
180	2	180.0 ± 0.0	180	180	15
190	1	190.0 ± 0.0	190	190	15
190	2	190.0 ± 0.0	190	190	15
200	1	200.0 ± 0.0	200	200	31
200	2	200.0 ± 0.0	200	200	31
190	1	190.0 ± 0.0	190	190	16
190	2	190.1 ± 0.3	190	191	18

Sensus S-28733 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	180.5 ± 0.5	180	181	16
180	2	180.0 ± 0.0	180	180	17
170	1	170.8 ± 0.4	170	171	16
170	2	170.0 ± 0.0	170	170	17
160	1	160.0 ± 0.0	160	160	17
160	2	160.0 ± 0.0	160	160	17
150	1	150.1 ± 0.3	150	151	30
150	2	150.0 ± 0.0	150	150	31
140	1	140.0 ± 0.0	140	140	16
140	2	140.0 ± 0.0	140	140	17
130	1	130.0 ± 0.0	130	130	17
130	2	130.0 ± 0.0	130	130	17
120	1	120.0 ± 0.0	120	120	17
120	2	120.1 ± 0.3	120	121	18
110	1	111.0 ± 0.0	111	111	17
110	2	110.0 ± 0.0	110	110	17
100	1	101.0 ± 0.0	101	101	32
100	2	100.0 ± 0.0	100	100	32
90	1	91.1 ± 0.3	91	92	18
90	2	90.0 ± 0.0	90	90	16
80	1	81.0 ± 0.0	81	81	17
80	2	81.0 ± 0.0	81	81	17
70	1	71.0 ± 0.0	71	71	16
70	2	71.0 ± 0.0	71	71	16
60	1	60.0 ± 0.0	60	60	16
60	2	60.0 ± 0.0	60	60	17
50	1	51.0 ± 0.0	51	51	31
50	2	51.0 ± 0.0	51	51	31
40	1	41.0 ± 0.0	41	41	16
40	2	40.8 ± 0.4	40	41	16
30	1	31.0 ± 0.0	31	31	16
30	2	30.7 ± 0.5	30	31	16
20	1	20.9 ± 0.2	20	21	16
20	2	20.1 ± 0.3	20	21	18
10	1	10.9 ± 0.4	10	11	15
10	2	10.0 ± 0.0	10	10	16

Sensus S-28734

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
10	1	11.0 ± 0.0	11	11	14
10	2	10.0 ± 0.0	10	10	15
20	1	21.0 ± 0.0	21	21	16
20	2	20.0 ± 0.0	20	20	16
30	1	31.0 ± 0.0	31	31	15
30	2	30.4 ± 0.5	30	31	15
40	1	41.0 ± 0.0	41	41	15
40	2	40.8 ± 0.4	40	41	16
50	1	51.0 ± 0.0	51	51	30
50	2	51.0 ± 0.0	51	51	31
60	1	60.0 ± 0.0	60	60	15
60	2	60.0 ± 0.0	60	60	15
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	15
80	1	81.0 ± 0.0	81	81	15
80	2	81.0 ± 0.0	81	81	15
90	1	91.0 ± 0.0	91	91	15
90	2	90.0 ± 0.0	90	90	15
100	1	101.0 ± 0.0	101	101	31
100	2	100.0 ± 0.0	100	100	30
110	1	110.9 ± 0.3	110	111	16
110	2	110.0 ± 0.0	110	110	16
120	1	120.0 ± 0.0	120	120	16
120	2	120.0 ± 0.0	120	120	15
130	1	130.0 ± 0.0	130	130	15
130	2	130.0 ± 0.0	130	130	15
140	1	140.0 ± 0.0	140	140	15
140	2	140.0 ± 0.0	140	140	16
150	1	150.0 ± 0.0	150	150	31
150	2	150.0 ± 0.0	150	150	30
160	1	160.0 ± 0.0	160	160	15
160	2	159.4 ± 0.5	159	160	15
170	1	170.0 ± 0.0	170	170	15
170	2	169.1 ± 0.3	169	170	15
180	1	180.0 ± 0.0	180	180	15
180	2	180.0 ± 0.0	180	180	15
190	1	190.0 ± 0.0	190	190	15
190	2	189.3 ± 0.5	189	190	15
200	1	200.0 ± 0.0	200	200	30
200	2	199.1 ± 0.3	199	200	30
190	1	190.0 ± 0.0	190	190	17
190	2	189.0 ± 0.0	189	189	17

Sensus S-28734 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	180.0 ± 0.0	180	180	16
180	2	180.0 ± 0.0	180	180	16
170	1	170.0 ± 0.0	170	170	16
170	2	169.0 ± 0.0	169	169	16
160	1	160.0 ± 0.0	160	160	16
160	2	159.3 ± 0.5	159	160	15
150	1	150.0 ± 0.0	150	150	31
150	2	150.0 ± 0.0	150	150	31
140	1	140.0 ± 0.0	140	140	16
140	2	140.0 ± 0.0	140	140	16
130	1	130.0 ± 0.0	130	130	16
130	2	130.0 ± 0.0	130	130	16
120	1	120.0 ± 0.0	120	120	17
120	2	120.0 ± 0.0	120	120	17
110	1	110.2 ± 0.4	110	111	16
110	2	110.0 ± 0.0	110	110	16
100	1	100.8 ± 0.4	100	101	30
100	2	100.0 ± 0.0	100	100	32
90	1	90.4 ± 0.5	90	91	16
90	2	90.0 ± 0.0	90	90	17
80	1	81.0 ± 0.0	81	81	16
80	2	81.0 ± 0.0	81	81	17
70	1	71.0 ± 0.0	71	71	16
70	2	71.0 ± 0.0	71	71	16
60	1	60.0 ± 0.0	60	60	16
60	2	60.0 ± 0.0	60	60	16
50	1	51.1 ± 0.2	51	52	33
50	2	50.9 ± 0.3	50	51	30
40	1	41.0 ± 0.0	41	41	16
40	2	40.5 ± 0.5	40	41	15
30	1	31.0 ± 0.0	31	31	16
30	2	30.6 ± 0.5	30	31	16
20	1	20.6 ± 0.5	20	21	15
20	2	20.0 ± 0.0	20	20	17
10	1	10.7 ± 0.5	10	11	16
10	2	10.0 ± 0.0	10	10	17

Sensus S-28770

Actual Depth	Run #	Avg Depth \pm SD	Min Depth	Max Depth	# of Samples
10	1	10.9 \pm 0.3	10	11	16
10	2	10.0 \pm 0.0	10	10	15
20	1	21.0 \pm 0.0	21	21	15
20	2	20.0 \pm 0.0	20	20	15
30	1	31.0 \pm 0.0	31	31	16
30	2	30.1 \pm 0.4	30	31	15
40	1	41.0 \pm 0.0	41	41	15
40	2	40.7 \pm 0.5	40	41	16
50	1	51.0 \pm 0.0	51	51	30
50	2	50.8 \pm 0.4	50	51	30
60	1	60.0 \pm 0.0	60	60	15
60	2	60.0 \pm 0.0	60	60	15
70	1	71.0 \pm 0.0	71	71	15
70	2	71.0 \pm 0.0	71	71	15
80	1	81.0 \pm 0.0	81	81	16
80	2	81.0 \pm 0.0	81	81	15
90	1	91.0 \pm 0.0	91	91	15
90	2	90.0 \pm 0.0	90	90	15
100	1	101.0 \pm 0.0	101	101	30
100	2	100.0 \pm 0.0	100	100	30
110	1	111.0 \pm 0.0	111	111	14
110	2	110.0 \pm 0.0	110	110	15
120	1	120.0 \pm 0.0	120	120	15
120	2	120.0 \pm 0.0	120	120	16
130	1	130.0 \pm 0.0	130	130	15
130	2	130.0 \pm 0.0	130	130	15
140	1	140.0 \pm 0.0	140	140	15
140	2	140.0 \pm 0.0	140	140	15
150	1	150.0 \pm 0.0	150	150	30
150	2	150.0 \pm 0.0	150	150	31
160	1	160.0 \pm 0.0	160	160	15
160	2	160.0 \pm 0.0	160	160	15
170	1	170.0 \pm 0.0	170	170	15
170	2	170.0 \pm 0.0	170	170	15
180	1	180.0 \pm 0.0	180	180	15
180	2	180.0 \pm 0.0	180	180	15
190	1	190.0 \pm 0.0	190	190	15
190	2	189.6 \pm 0.5	189	190	14
200	1	200.0 \pm 0.0	200	200	30
200	2	200.0 \pm 0.0	200	200	30
190	1	190.0 \pm 0.0	190	190	16
190	2	189.3 \pm 0.5	189	190	15

Sensus S-28770 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	180.0 ± 0.0	180	180	16
180	2	180.0 ± 0.0	180	180	16
170	1	170.0 ± 0.0	170	170	16
170	2	169.9 ± 0.2	169	170	16
160	1	160.0 ± 0.0	160	160	16
160	2	159.5 ± 0.5	159	160	15
150	1	150.0 ± 0.0	150	150	32
150	2	150.0 ± 0.0	150	150	32
140	1	140.1 ± 0.3	140	141	18
140	2	140.0 ± 0.0	140	140	17
130	1	130.0 ± 0.0	130	130	16
130	2	130.0 ± 0.0	130	130	16
120	1	120.0 ± 0.0	120	120	17
120	2	120.0 ± 0.0	120	120	17
110	1	111.0 ± 0.0	111	111	17
110	2	110.0 ± 0.0	110	110	16
100	1	101.0 ± 0.2	100	101	30
100	2	100.0 ± 0.0	100	100	31
90	1	91.0 ± 0.0	91	91	16
90	2	90.0 ± 0.0	90	90	17
80	1	81.0 ± 0.0	81	81	16
80	2	81.0 ± 0.0	81	81	16
70	1	71.0 ± 0.0	71	71	16
70	2	71.0 ± 0.0	71	71	16
60	1	60.0 ± 0.0	60	60	16
60	2	60.0 ± 0.0	60	60	16
50	1	51.0 ± 0.0	51	51	32
50	2	51.0 ± 0.2	50	51	31
40	1	41.0 ± 0.0	41	41	17
40	2	40.8 ± 0.4	40	41	15
30	1	31.0 ± 0.0	31	31	16
30	2	30.0 ± 0.0	30	30	16
20	1	20.9 ± 0.3	20	21	15
20	2	20.0 ± 0.0	20	20	16
10	1	10.9 ± 0.3	10	11	16
10	2	10.0 ± 0.0	10	10	17

Sensus S-28771

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
10	1	11.0 ± 0.0	11	11	15
10	2	10.0 ± 0.0	10	10	15
20	1	21.0 ± 0.0	21	21	15
20	2	20.0 ± 0.0	20	20	15
30	1	31.0 ± 0.0	31	31	15
30	2	30.7 ± 0.5	30	31	16
40	1	41.0 ± 0.0	41	41	16
40	2	41.0 ± 0.0	41	41	15
50	1	51.0 ± 0.0	51	51	31
50	2	51.0 ± 0.0	51	51	30
60	1	60.1 ± 0.3	60	61	15
60	2	60.0 ± 0.0	60	60	15
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	15
80	1	81.0 ± 0.0	81	81	15
80	2	81.0 ± 0.0	81	81	16
90	1	91.0 ± 0.0	91	91	16
90	2	90.2 ± 0.4	90	91	16
100	1	101.0 ± 0.0	101	101	30
100	2	100.0 ± 0.0	100	100	31
110	1	111.0 ± 0.0	111	111	15
110	2	110.0 ± 0.0	110	110	15
120	1	120.0 ± 0.0	120	120	15
120	2	120.0 ± 0.0	120	120	15
130	1	130.0 ± 0.0	130	130	15
130	2	130.0 ± 0.0	130	130	15
140	1	140.1 ± 0.2	140	141	16
140	2	140.0 ± 0.0	140	140	15
150	1	150.4 ± 0.5	150	151	30
150	2	150.0 ± 0.0	150	150	30
160	1	160.0 ± 0.0	160	160	15
160	2	160.0 ± 0.0	160	160	15
170	1	171.0 ± 0.0	171	171	15
170	2	170.0 ± 0.0	170	170	15
180	1	181.0 ± 0.0	181	181	15
180	2	180.0 ± 0.0	180	180	15
190	1	190.0 ± 0.0	190	190	15
190	2	190.0 ± 0.0	190	190	15
200	1	200.0 ± 0.0	200	200	31
200	2	200.0 ± 0.0	200	200	31
190	1	190.0 ± 0.0	190	190	16
190	2	190.0 ± 0.0	190	190	16

Sensus S-28771 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	181.0 ± 0.0	181	181	17
180	2	180.1 ± 0.3	180	181	18
170	1	170.9 ± 0.3	170	171	15
170	2	170.0 ± 0.0	170	170	16
160	1	160.0 ± 0.0	160	160	16
160	2	160.0 ± 0.0	160	160	17
150	1	150.5 ± 0.5	150	151	31
150	2	150.0 ± 0.0	150	150	32
140	1	140.0 ± 0.0	140	140	17
140	2	140.0 ± 0.0	140	140	17
130	1	130.0 ± 0.0	130	130	17
130	2	130.0 ± 0.0	130	130	16
120	1	120.0 ± 0.0	120	120	17
120	2	120.0 ± 0.0	120	120	17
110	1	111.0 ± 0.0	111	111	17
110	2	110.0 ± 0.0	110	110	17
100	1	101.0 ± 0.0	101	101	31
100	2	100.0 ± 0.0	100	100	31
90	1	91.0 ± 0.0	91	91	16
90	2	90.1 ± 0.2	90	91	16
80	1	81.0 ± 0.0	81	81	16
80	2	81.0 ± 0.0	81	81	16
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	16
60	1	60.0 ± 0.0	60	60	17
60	2	60.0 ± 0.0	60	60	16
50	1	51.0 ± 0.0	51	51	31
50	2	51.0 ± 0.0	51	51	32
40	1	40.9 ± 0.2	40	41	17
40	2	40.9 ± 0.3	40	41	16
30	1	31.0 ± 0.0	31	31	17
30	2	30.5 ± 0.5	30	31	15
20	1	21.0 ± 0.0	21	21	17
20	2	20.0 ± 0.0	20	20	16
10	1	10.9 ± 0.4	10	11	15
10	2	10.0 ± 0.0	10	10	16

Sensus S-28772

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
10	1	11.0 ± 0.0	11	11	15
10	2	10.0 ± 0.0	10	10	15
20	1	21.0 ± 0.0	21	21	15
20	2	20.0 ± 0.0	20	20	15
30	1	31.0 ± 0.0	31	31	16
30	2	30.9 ± 0.4	30	31	15
40	1	41.0 ± 0.0	41	41	15
40	2	41.0 ± 0.0	41	41	15
50	1	51.0 ± 0.0	51	51	30
50	2	51.0 ± 0.0	51	51	30
60	1	60.0 ± 0.0	60	60	15
60	2	60.0 ± 0.0	60	60	15
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	15
80	1	81.0 ± 0.0	81	81	16
80	2	81.0 ± 0.0	81	81	15
90	1	91.0 ± 0.0	91	91	15
90	2	90.0 ± 0.0	90	90	15
100	1	101.0 ± 0.0	101	101	30
100	2	100.0 ± 0.0	100	100	30
110	1	111.0 ± 0.0	111	111	15
110	2	110.0 ± 0.0	110	110	15
120	1	120.0 ± 0.0	120	120	15
120	2	120.0 ± 0.0	120	120	16
130	1	130.0 ± 0.0	130	130	15
130	2	130.0 ± 0.0	130	130	15
140	1	140.1 ± 0.4	140	141	15
140	2	140.0 ± 0.0	140	140	15
150	1	150.5 ± 0.5	150	151	30
150	2	150.0 ± 0.0	150	150	30
160	1	160.0 ± 0.0	160	160	15
160	2	160.0 ± 0.0	160	160	15
170	1	171.0 ± 0.0	171	171	15
170	2	170.0 ± 0.0	170	170	15
180	1	181.0 ± 0.0	181	181	15
180	2	180.0 ± 0.0	180	180	15
190	1	190.0 ± 0.0	190	190	15
190	2	190.0 ± 0.0	190	190	16
200	1	200.0 ± 0.0	200	200	30
200	2	200.0 ± 0.0	200	200	30
190	1	190.0 ± 0.0	190	190	16
190	2	190.0 ± 0.0	190	190	16

Sensus S-28772 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	180.4 ± 0.5	180	181	16
180	2	180.0 ± 0.0	180	180	16
170	1	170.3 ± 0.5	170	171	15
170	2	169.9 ± 0.3	169	170	16
160	1	160.0 ± 0.0	160	160	16
160	2	160.0 ± 0.0	160	160	16
150	1	150.1 ± 0.3	150	151	33
150	2	150.1 ± 0.2	150	151	33
140	1	140.0 ± 0.0	140	140	16
140	2	140.0 ± 0.0	140	140	16
130	1	130.0 ± 0.0	130	130	16
130	2	130.0 ± 0.0	130	130	16
120	1	120.0 ± 0.0	120	120	17
120	2	120.0 ± 0.0	120	120	17
110	1	111.0 ± 0.0	111	111	16
110	2	110.0 ± 0.0	110	110	16
100	1	101.0 ± 0.0	101	101	31
100	2	100.0 ± 0.0	100	100	31
90	1	91.0 ± 0.0	91	91	16
90	2	90.0 ± 0.0	90	90	17
80	1	81.0 ± 0.0	81	81	16
80	2	81.0 ± 0.0	81	81	16
70	1	71.0 ± 0.0	71	71	16
70	2	71.0 ± 0.0	71	71	16
60	1	60.0 ± 0.0	60	60	16
60	2	60.0 ± 0.0	60	60	16
50	1	51.0 ± 0.0	51	51	32
50	2	51.0 ± 0.0	51	51	32
40	1	41.0 ± 0.0	41	41	17
40	2	41.0 ± 0.0	41	41	16
30	1	31.0 ± 0.0	31	31	16
30	2	31.0 ± 0.0	31	31	16
20	1	20.9 ± 0.3	20	21	15
20	2	20.2 ± 0.4	20	21	16
10	1	10.9 ± 0.3	10	11	16
10	2	10.0 ± 0.0	10	10	17

Sensus S-28773

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
10	1	10.1 ± 0.4	10	11	15
10	2	10.0 ± 0.0	10	10	15
20	1	21.0 ± 0.0	21	21	15
20	2	20.0 ± 0.0	20	20	15
30	1	31.0 ± 0.0	31	31	16
30	2	30.8 ± 0.4	30	31	15
40	1	41.0 ± 0.0	41	41	15
40	2	41.0 ± 0.0	41	41	15
50	1	51.0 ± 0.0	51	51	30
50	2	51.0 ± 0.0	51	51	30
60	1	60.0 ± 0.0	60	60	15
60	2	60.0 ± 0.0	60	60	15
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	15
80	1	81.0 ± 0.0	81	81	16
80	2	81.0 ± 0.0	81	81	15
90	1	91.0 ± 0.0	91	91	15
90	2	90.0 ± 0.0	90	90	15
100	1	101.0 ± 0.0	101	101	30
100	2	100.0 ± 0.0	100	100	30
110	1	111.0 ± 0.0	111	111	15
110	2	110.0 ± 0.0	110	110	15
120	1	120.0 ± 0.0	120	120	16
120	2	120.0 ± 0.0	120	120	16
130	1	130.0 ± 0.0	130	130	15
130	2	130.0 ± 0.0	130	130	15
140	1	140.0 ± 0.0	140	140	15
140	2	140.0 ± 0.0	140	140	15
150	1	150.4 ± 0.5	150	151	31
150	2	150.0 ± 0.0	150	150	31
160	1	160.0 ± 0.0	160	160	15
160	2	160.0 ± 0.0	160	160	15
170	1	170.1 ± 0.3	170	171	15
170	2	170.0 ± 0.0	170	170	15
180	1	180.8 ± 0.4	180	181	14
180	2	180.0 ± 0.0	180	180	15
190	1	190.0 ± 0.0	190	190	15
190	2	190.0 ± 0.0	190	190	15
200	1	200.0 ± 0.0	200	200	31
200	2	200.0 ± 0.0	200	200	30
190	1	190.0 ± 0.0	190	190	16
190	2	190.0 ± 0.0	190	190	16

Sensus S-28773 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	180.6 ± 0.5	180	181	16
180	2	180.0 ± 0.0	180	180	16
170	1	170.1 ± 0.2	170	171	16
170	2	170.0 ± 0.0	170	170	16
160	1	160.0 ± 0.0	160	160	16
160	2	160.0 ± 0.0	160	160	16
150	1	150.2 ± 0.4	150	151	31
150	2	150.1 ± 0.2	150	151	33
140	1	140.0 ± 0.0	140	140	16
140	2	140.0 ± 0.0	140	140	16
130	1	130.0 ± 0.0	130	130	16
130	2	130.0 ± 0.0	130	130	16
120	1	120.0 ± 0.0	120	120	17
120	2	120.0 ± 0.0	120	120	17
110	1	111.0 ± 0.0	111	111	16
110	2	110.0 ± 0.0	110	110	16
100	1	101.0 ± 0.0	101	101	31
100	2	100.0 ± 0.0	100	100	32
90	1	91.0 ± 0.0	91	91	16
90	2	90.0 ± 0.0	90	90	17
80	1	81.0 ± 0.0	81	81	16
80	2	81.0 ± 0.0	81	81	16
70	1	71.0 ± 0.0	71	71	16
70	2	71.0 ± 0.0	71	71	16
60	1	60.0 ± 0.0	60	60	16
60	2	60.0 ± 0.0	60	60	16
50	1	51.0 ± 0.0	51	51	32
50	2	51.0 ± 0.2	50	51	30
40	1	41.0 ± 0.0	41	41	17
40	2	40.9 ± 0.2	40	41	16
30	1	31.0 ± 0.0	31	31	16
30	2	30.5 ± 0.5	30	31	15
20	1	21.0 ± 0.0	21	21	16
20	2	20.0 ± 0.0	20	20	16
10	1	10.8 ± 0.4	10	11	16
10	2	10.0 ± 0.0	10	10	17

Sensus S-28774

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
10	1	10.9 ± 0.4	10	11	14
10	2	10.0 ± 0.0	10	10	15
20	1	20.9 ± 0.4	20	21	15
20	2	20.0 ± 0.0	20	20	15
30	1	31.0 ± 0.0	31	31	16
30	2	30.1 ± 0.3	30	31	15
40	1	41.0 ± 0.0	41	41	15
40	2	41.0 ± 0.0	41	41	15
50	1	51.0 ± 0.0	51	51	30
50	2	51.0 ± 0.0	51	51	30
60	1	60.0 ± 0.0	60	60	15
60	2	60.0 ± 0.0	60	60	15
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	15
80	1	81.0 ± 0.0	81	81	16
80	2	81.0 ± 0.0	81	81	15
90	1	91.0 ± 0.0	91	91	15
90	2	90.0 ± 0.0	90	90	15
100	1	101.0 ± 0.0	101	101	30
100	2	100.0 ± 0.0	100	100	30
110	1	110.9 ± 0.4	110	111	15
110	2	110.0 ± 0.0	110	110	15
120	1	120.0 ± 0.0	120	120	15
120	2	120.0 ± 0.0	120	120	16
130	1	130.0 ± 0.0	130	130	15
130	2	130.0 ± 0.0	130	130	15
140	1	140.0 ± 0.0	140	140	15
140	2	140.0 ± 0.0	140	140	15
150	1	150.0 ± 0.0	150	150	30
150	2	150.0 ± 0.0	150	150	30
160	1	160.0 ± 0.0	160	160	15
160	2	160.0 ± 0.0	160	160	15
170	1	170.8 ± 0.4	170	171	15
170	2	170.0 ± 0.0	170	170	15
180	1	180.3 ± 0.5	180	181	15
180	2	180.0 ± 0.0	180	180	15
190	1	190.0 ± 0.0	190	190	15
190	2	190.0 ± 0.0	190	190	16
200	1	200.0 ± 0.0	200	200	31
200	2	200.0 ± 0.0	200	200	30
190	1	190.0 ± 0.0	190	190	16
190	2	189.7 ± 0.5	189	190	15

Sensus S-28774 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	180.0 ± 0.0	180	180	16
180	2	180.0 ± 0.0	180	180	16
170	1	170.2 ± 0.4	170	171	16
170	2	170.0 ± 0.0	170	170	16
160	1	160.0 ± 0.0	160	160	16
160	2	160.0 ± 0.0	160	160	16
150	1	150.0 ± 0.0	150	150	32
150	2	150.0 ± 0.0	150	150	32
140	1	140.0 ± 0.0	140	140	17
140	2	140.1 ± 0.3	140	141	18
130	1	130.0 ± 0.0	130	130	16
130	2	130.0 ± 0.0	130	130	16
120	1	120.0 ± 0.0	120	120	17
120	2	120.0 ± 0.0	120	120	17
110	1	110.9 ± 0.2	110	111	16
110	2	110.0 ± 0.0	110	110	17
100	1	101.0 ± 0.0	101	101	31
100	2	100.0 ± 0.0	100	100	31
90	1	91.0 ± 0.0	91	91	16
90	2	90.0 ± 0.0	90	90	16
80	1	81.0 ± 0.0	81	81	16
80	2	81.0 ± 0.0	81	81	16
70	1	71.0 ± 0.0	71	71	16
70	2	71.0 ± 0.0	71	71	16
60	1	60.0 ± 0.0	60	60	17
60	2	60.0 ± 0.0	60	60	16
50	1	51.0 ± 0.0	51	51	31
50	2	50.8 ± 0.4	50	51	31
40	1	41.0 ± 0.0	41	41	17
40	2	40.7 ± 0.5	40	41	17
30	1	30.9 ± 0.2	30	31	16
30	2	30.0 ± 0.0	30	30	16
20	1	20.7 ± 0.5	20	21	15
20	2	20.0 ± 0.0	20	20	16
10	1	10.7 ± 0.5	10	11	15
10	2	10.0 ± 0.0	10	10	16

Sensus S-38682

Actual Depth	Run #	Avg Depth \pm SD	Min Depth	Max Depth	# of Samples
10	1	11.0 \pm 0.0	11	11	14
10	2	10.1 \pm 0.3	10	11	15
20	1	21.0 \pm 0.0	21	21	16
20	2	20.8 \pm 0.4	20	21	16
30	1	31.0 \pm 0.0	31	31	15
30	2	31.0 \pm 0.0	31	31	15
40	1	41.0 \pm 0.0	41	41	15
40	2	41.0 \pm 0.0	41	41	15
50	1	51.0 \pm 0.0	51	51	30
50	2	51.0 \pm 0.0	51	51	30
60	1	60.0 \pm 0.0	60	60	15
60	2	60.0 \pm 0.0	60	60	15
70	1	71.0 \pm 0.0	71	71	15
70	2	71.0 \pm 0.0	71	71	15
80	1	81.0 \pm 0.0	81	81	15
80	2	81.0 \pm 0.0	81	81	15
90	1	91.0 \pm 0.0	91	91	15
90	2	90.5 \pm 0.5	90	91	15
100	1	101.0 \pm 0.0	101	101	30
100	2	100.5 \pm 0.5	100	101	30
110	1	111.0 \pm 0.0	111	111	15
110	2	110.0 \pm 0.0	110	110	16
120	1	120.0 \pm 0.0	120	120	16
120	2	120.0 \pm 0.0	120	120	16
130	1	130.0 \pm 0.0	130	130	15
130	2	130.0 \pm 0.0	130	130	15
140	1	140.0 \pm 0.0	140	140	15
140	2	140.0 \pm 0.0	140	140	15
150	1	150.1 \pm 0.3	150	151	30
150	2	150.0 \pm 0.0	150	150	31
160	1	160.0 \pm 0.0	160	160	14
160	2	160.0 \pm 0.0	160	160	15
170	1	170.7 \pm 0.5	170	171	15
170	2	170.0 \pm 0.0	170	170	15
180	1	181.0 \pm 0.0	181	181	16
180	2	180.0 \pm 0.0	180	180	15
190	1	190.0 \pm 0.0	190	190	16
190	2	190.0 \pm 0.0	190	190	15
200	1	200.0 \pm 0.0	200	200	30
200	2	200.0 \pm 0.0	200	200	31
190	1	190.0 \pm 0.0	190	190	17
190	2	190.0 \pm 0.0	190	190	17

Sensus S-38682 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	180.9 ± 0.3	180	181	15
180	2	180.0 ± 0.0	180	180	16
170	1	170.9 ± 0.4	170	171	15
170	2	170.0 ± 0.0	170	170	16
160	1	160.0 ± 0.0	160	160	16
160	2	160.0 ± 0.0	160	160	16
150	1	150.1 ± 0.3	150	151	30
150	2	150.0 ± 0.0	150	150	31
140	1	140.1 ± 0.3	140	141	16
140	2	140.0 ± 0.0	140	140	16
130	1	130.0 ± 0.0	130	130	16
130	2	130.0 ± 0.0	130	130	17
120	1	120.0 ± 0.0	120	120	17
120	2	120.0 ± 0.0	120	120	17
110	1	111.0 ± 0.0	111	111	16
110	2	110.0 ± 0.0	110	110	17
100	1	101.0 ± 0.0	101	101	31
100	2	100.2 ± 0.4	100	101	32
90	1	91.0 ± 0.0	91	91	17
90	2	90.1 ± 0.2	90	91	17
80	1	81.0 ± 0.0	81	81	16
80	2	81.0 ± 0.0	81	81	17
70	1	71.0 ± 0.0	71	71	16
70	2	71.0 ± 0.0	71	71	16
60	1	60.0 ± 0.0	60	60	16
60	2	60.0 ± 0.0	60	60	16
50	1	51.0 ± 0.0	51	51	32
50	2	51.0 ± 0.0	51	51	31
40	1	41.0 ± 0.0	41	41	17
40	2	41.0 ± 0.0	41	41	16
30	1	31.0 ± 0.0	31	31	16
30	2	30.7 ± 0.5	30	31	15
20	1	21.0 ± 0.0	21	21	16
20	2	20.5 ± 0.5	20	21	16
10	1	10.9 ± 0.3	10	11	16
10	2	10.0 ± 0.0	10	10	17

Sensus S-38687

Actual Depth	Run #	Avg Depth \pm SD	Min Depth	Max Depth	# of Samples
10	1	11.0 \pm 0.0	11	11	15
10	2	10.0 \pm 0.0	10	10	15
20	1	21.0 \pm 0.0	21	21	15
20	2	20.0 \pm 0.0	20	20	15
30	1	31.0 \pm 0.0	31	31	16
30	2	30.7 \pm 0.5	30	31	15
40	1	41.0 \pm 0.0	41	41	15
40	2	41.0 \pm 0.0	41	41	15
50	1	51.0 \pm 0.0	51	51	30
50	2	51.0 \pm 0.0	51	51	30
60	1	60.1 \pm 0.3	60	61	15
60	2	60.0 \pm 0.0	60	60	15
70	1	71.0 \pm 0.0	71	71	15
70	2	71.0 \pm 0.0	71	71	15
80	1	81.0 \pm 0.0	81	81	16
80	2	81.0 \pm 0.0	81	81	15
90	1	91.0 \pm 0.0	91	91	15
90	2	90.0 \pm 0.0	90	90	15
100	1	101.0 \pm 0.0	101	101	30
100	2	100.0 \pm 0.0	100	100	30
110	1	110.9 \pm 0.3	110	111	15
110	2	110.0 \pm 0.0	110	110	15
120	1	120.0 \pm 0.0	120	120	16
120	2	120.0 \pm 0.0	120	120	16
130	1	130.0 \pm 0.0	130	130	15
130	2	130.0 \pm 0.0	130	130	15
140	1	140.0 \pm 0.0	140	140	15
140	2	140.0 \pm 0.0	140	140	15
150	1	150.0 \pm 0.0	150	150	30
150	2	150.0 \pm 0.0	150	150	30
160	1	160.0 \pm 0.0	160	160	15
160	2	160.0 \pm 0.0	160	160	15
170	1	170.3 \pm 0.5	170	171	15
170	2	170.0 \pm 0.0	170	170	15
180	1	180.4 \pm 0.5	180	181	15
180	2	180.0 \pm 0.0	180	180	15
190	1	190.0 \pm 0.0	190	190	15
190	2	190.0 \pm 0.0	190	190	16
200	1	200.0 \pm 0.0	200	200	30
200	2	200.0 \pm 0.0	200	200	30
190	1	190.0 \pm 0.0	190	190	16
190	2	190.0 \pm 0.0	190	190	16

Sensus S-38687 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	180.4 ± 0.5	180	181	15
180	2	180.0 ± 0.0	180	180	16
170	1	170.0 ± 0.0	170	170	16
170	2	169.8 ± 0.4	169	170	15
160	1	160.0 ± 0.0	160	160	16
160	2	159.9 ± 0.3	159	160	15
150	1	150.0 ± 0.0	150	150	32
150	2	150.0 ± 0.0	150	150	32
140	1	140.3 ± 0.5	140	141	16
140	2	140.0 ± 0.0	140	140	16
130	1	130.0 ± 0.0	130	130	16
130	2	130.0 ± 0.0	130	130	16
120	1	120.0 ± 0.0	120	120	17
120	2	120.0 ± 0.0	120	120	17
110	1	111.0 ± 0.0	111	111	16
110	2	110.0 ± 0.0	110	110	16
100	1	101.0 ± 0.0	101	101	31
100	2	100.0 ± 0.0	100	100	31
90	1	91.0 ± 0.0	91	91	16
90	2	90.0 ± 0.0	90	90	17
80	1	81.0 ± 0.0	81	81	16
80	2	81.0 ± 0.0	81	81	16
70	1	71.0 ± 0.0	71	71	16
70	2	71.0 ± 0.0	71	71	16
60	1	60.0 ± 0.0	60	60	16
60	2	60.0 ± 0.0	60	60	16
50	1	51.0 ± 0.0	51	51	32
50	2	50.9 ± 0.3	50	51	31
40	1	41.0 ± 0.0	41	41	17
40	2	41.1 ± 0.3	41	42	18
30	1	31.0 ± 0.0	31	31	16
30	2	30.7 ± 0.5	30	31	15
20	1	20.9 ± 0.3	20	21	15
20	2	20.0 ± 0.0	20	20	16
10	1	10.8 ± 0.4	10	11	16
10	2	10.0 ± 0.0	10	10	17

Sensus S-38692

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
10	1	10.9 ± 0.4	10	11	15
10	2	10.0 ± 0.0	10	10	15
20	1	21.0 ± 0.0	21	21	16
20	2	20.0 ± 0.0	20	20	16
30	1	31.0 ± 0.0	31	31	15
30	2	30.3 ± 0.5	30	31	15
40	1	41.0 ± 0.0	41	41	15
40	2	41.0 ± 0.0	41	41	16
50	1	51.0 ± 0.0	51	51	30
50	2	51.0 ± 0.0	51	51	31
60	1	60.7 ± 0.5	60	61	15
60	2	60.0 ± 0.0	60	60	15
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	15
80	1	81.0 ± 0.0	81	81	15
80	2	81.0 ± 0.0	81	81	15
90	1	91.0 ± 0.0	91	91	15
90	2	90.3 ± 0.5	90	91	15
100	1	101.0 ± 0.0	101	101	31
100	2	100.4 ± 0.5	100	101	30
110	1	111.0 ± 0.0	111	111	15
110	2	110.2 ± 0.4	110	111	16
120	1	120.0 ± 0.0	120	120	16
120	2	120.0 ± 0.0	120	120	15
130	1	130.0 ± 0.0	130	130	15
130	2	130.0 ± 0.0	130	130	15
140	1	140.3 ± 0.5	140	141	15
140	2	140.0 ± 0.0	140	140	16
150	1	150.9 ± 0.3	150	151	30
150	2	150.0 ± 0.0	150	150	31
160	1	160.0 ± 0.0	160	160	15
160	2	160.0 ± 0.0	160	160	15
170	1	171.0 ± 0.0	171	171	15
170	2	170.0 ± 0.0	170	170	15
180	1	181.0 ± 0.0	181	181	16
180	2	180.0 ± 0.0	180	180	16
190	1	190.0 ± 0.0	190	190	16
190	2	190.0 ± 0.0	190	190	15
200	1	200.0 ± 0.0	200	200	31
200	2	200.0 ± 0.0	200	200	31
190	1	190.0 ± 0.0	190	190	16
190	2	190.0 ± 0.0	190	190	16

Sensus S-38692 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	181.0 ± 0.0	181	181	17
180	2	180.0 ± 0.0	180	180	17
170	1	171.1 ± 0.3	171	172	18
170	2	170.1 ± 0.3	170	171	17
160	1	160.0 ± 0.0	160	160	17
160	2	160.0 ± 0.0	160	160	17
150	1	151.0 ± 0.2	150	151	30
150	2	150.0 ± 0.0	150	150	31
140	1	140.9 ± 0.4	140	141	15
140	2	140.0 ± 0.0	140	140	17
130	1	129.9 ± 0.2	129	130	17
130	2	130.0 ± 0.0	130	130	17
120	1	120.0 ± 0.0	120	120	17
120	2	120.0 ± 0.0	120	120	17
110	1	111.0 ± 0.0	111	111	17
110	2	110.0 ± 0.0	110	110	17
100	1	101.0 ± 0.0	101	101	32
100	2	100.0 ± 0.0	100	100	32
90	1	91.0 ± 0.0	91	91	17
90	2	90.1 ± 0.2	90	91	16
80	1	81.0 ± 0.0	81	81	17
80	2	81.0 ± 0.0	81	81	17
70	1	71.0 ± 0.0	71	71	16
70	2	71.0 ± 0.0	71	71	17
60	1	60.0 ± 0.0	60	60	16
60	2	60.0 ± 0.0	60	60	17
50	1	51.0 ± 0.0	51	51	31
50	2	51.0 ± 0.0	51	51	31
40	1	41.0 ± 0.0	41	41	16
40	2	40.9 ± 0.2	40	41	16
30	1	31.0 ± 0.0	31	31	16
30	2	30.1 ± 0.3	30	31	17
20	1	20.9 ± 0.2	20	21	16
20	2	20.0 ± 0.0	20	20	17
10	1	10.8 ± 0.4	10	11	16
10	2	10.0 ± 0.0	10	10	16

Sensus S-38695

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
10	1	10.9 ± 0.3	10	11	15
10	2	10.0 ± 0.0	10	10	16
20	1	21.0 ± 0.0	21	21	15
20	2	20.1 ± 0.4	20	21	15
30	1	31.0 ± 0.0	31	31	15
30	2	31.0 ± 0.0	31	31	16
40	1	41.0 ± 0.0	41	41	16
40	2	41.0 ± 0.0	41	41	15
50	1	51.0 ± 0.0	51	51	30
50	2	51.0 ± 0.0	51	51	30
60	1	60.0 ± 0.0	60	60	15
60	2	60.0 ± 0.0	60	60	15
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	15
80	1	81.0 ± 0.0	81	81	15
80	2	81.0 ± 0.0	81	81	16
90	1	91.0 ± 0.0	91	91	15
90	2	90.0 ± 0.0	90	90	16
100	1	101.0 ± 0.0	101	101	30
100	2	100.0 ± 0.0	100	100	31
110	1	111.0 ± 0.0	111	111	15
110	2	110.0 ± 0.0	110	110	15
120	1	120.0 ± 0.0	120	120	15
120	2	120.0 ± 0.0	120	120	15
130	1	130.0 ± 0.0	130	130	15
130	2	130.0 ± 0.0	130	130	15
140	1	140.0 ± 0.0	140	140	16
140	2	140.0 ± 0.0	140	140	15
150	1	150.0 ± 0.0	150	150	30
150	2	150.0 ± 0.0	150	150	30
160	1	160.0 ± 0.0	160	160	15
160	2	160.0 ± 0.0	160	160	15
170	1	170.9 ± 0.3	170	171	15
170	2	170.0 ± 0.0	170	170	15
180	1	181.0 ± 0.0	181	181	15
180	2	180.0 ± 0.0	180	180	15
190	1	190.0 ± 0.0	190	190	15
190	2	190.0 ± 0.0	190	190	15
200	1	200.0 ± 0.0	200	200	31
200	2	200.0 ± 0.0	200	200	31
190	1	190.0 ± 0.0	190	190	16
190	2	190.0 ± 0.0	190	190	16

Sensus S-38695 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	180.4 ± 0.5	180	181	18
180	2	180.0 ± 0.0	180	180	17
170	1	170.3 ± 0.5	170	171	15
170	2	170.0 ± 0.0	170	170	16
160	1	160.0 ± 0.0	160	160	16
160	2	160.0 ± 0.0	160	160	17
150	1	150.2 ± 0.4	150	151	31
150	2	150.0 ± 0.0	150	150	32
140	1	140.0 ± 0.0	140	140	17
140	2	140.0 ± 0.0	140	140	17
130	1	130.1 ± 0.3	130	131	18
130	2	130.0 ± 0.0	130	130	16
120	1	120.0 ± 0.0	120	120	17
120	2	120.0 ± 0.0	120	120	17
110	1	110.9 ± 0.2	110	111	16
110	2	110.0 ± 0.0	110	110	17
100	1	101.0 ± 0.0	101	101	31
100	2	100.0 ± 0.0	100	100	31
90	1	91.0 ± 0.0	91	91	16
90	2	90.0 ± 0.0	90	90	16
80	1	81.1 ± 0.3	81	82	18
80	2	81.0 ± 0.0	81	81	16
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	16
60	1	60.0 ± 0.0	60	60	17
60	2	60.0 ± 0.0	60	60	17
50	1	51.0 ± 0.0	51	51	31
50	2	51.0 ± 0.0	51	51	32
40	1	41.0 ± 0.0	41	41	16
40	2	40.9 ± 0.2	40	41	16
30	1	31.0 ± 0.0	31	31	17
30	2	30.5 ± 0.5	30	31	15
20	1	20.8 ± 0.4	20	21	16
20	2	20.0 ± 0.0	20	20	16
10	1	10.7 ± 0.5	10	11	15
10	2	10.0 ± 0.0	10	10	16

Sensus S-38696

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
10	1	11.0 ± 0.0	11	11	14
10	2	10.0 ± 0.0	10	10	15
20	1	21.0 ± 0.0	21	21	15
20	2	20.0 ± 0.0	20	20	16
30	1	31.0 ± 0.0	31	31	15
30	2	31.0 ± 0.0	31	31	15
40	1	41.0 ± 0.0	41	41	15
40	2	41.0 ± 0.0	41	41	16
50	1	51.0 ± 0.0	51	51	31
50	2	51.0 ± 0.0	51	51	30
60	1	60.0 ± 0.0	60	60	15
60	2	60.0 ± 0.0	60	60	16
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	15
80	1	81.0 ± 0.0	81	81	15
80	2	81.0 ± 0.0	81	81	15
90	1	91.0 ± 0.0	91	91	16
90	2	90.0 ± 0.0	90	90	15
100	1	101.0 ± 0.0	101	101	30
100	2	100.1 ± 0.2	100	101	31
110	1	111.0 ± 0.0	111	111	15
110	2	110.0 ± 0.0	110	110	15
120	1	120.0 ± 0.0	120	120	16
120	2	120.0 ± 0.0	120	120	15
130	1	130.0 ± 0.0	130	130	15
130	2	130.0 ± 0.0	130	130	15
140	1	140.1 ± 0.3	140	141	15
140	2	140.0 ± 0.0	140	140	16
150	1	150.1 ± 0.3	150	151	31
150	2	150.0 ± 0.0	150	150	30
160	1	160.0 ± 0.0	160	160	15
160	2	160.0 ± 0.0	160	160	15
170	1	171.0 ± 0.0	171	171	15
170	2	170.0 ± 0.0	170	170	15
180	1	181.0 ± 0.0	181	181	15
180	2	180.0 ± 0.0	180	180	15
190	1	190.0 ± 0.0	190	190	15
190	2	190.0 ± 0.0	190	190	15
200	1	200.0 ± 0.0	200	200	31
200	2	200.0 ± 0.0	200	200	31
190	1	190.0 ± 0.0	190	190	16
190	2	190.0 ± 0.0	190	190	16

Sensus S-38696 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	181.0 ± 0.0	181	181	17
180	2	180.0 ± 0.0	180	180	17
170	1	171.0 ± 0.0	171	171	16
170	2	170.0 ± 0.0	170	170	16
160	1	160.0 ± 0.0	160	160	17
160	2	160.0 ± 0.0	160	160	17
150	1	150.9 ± 0.3	150	151	30
150	2	150.0 ± 0.0	150	150	32
140	1	140.6 ± 0.5	140	141	16
140	2	140.0 ± 0.0	140	140	17
130	1	130.0 ± 0.0	130	130	17
130	2	130.1 ± 0.3	130	131	18
120	1	120.0 ± 0.0	120	120	16
120	2	120.0 ± 0.0	120	120	17
110	1	111.0 ± 0.0	111	111	17
110	2	110.1 ± 0.2	110	111	16
100	1	101.0 ± 0.0	101	101	32
100	2	100.5 ± 0.5	100	101	31
90	1	91.0 ± 0.0	91	91	16
90	2	90.4 ± 0.5	90	91	15
80	1	81.0 ± 0.0	81	81	17
80	2	81.0 ± 0.0	81	81	16
70	1	71.0 ± 0.0	71	71	16
70	2	71.0 ± 0.0	71	71	16
60	1	60.0 ± 0.0	60	60	16
60	2	60.0 ± 0.0	60	60	17
50	1	51.0 ± 0.0	51	51	31
50	2	51.0 ± 0.0	51	51	32
40	1	41.0 ± 0.0	41	41	16
40	2	41.0 ± 0.0	41	41	17
30	1	31.0 ± 0.0	31	31	17
30	2	30.9 ± 0.3	30	31	17
20	1	20.9 ± 0.2	20	21	16
20	2	20.1 ± 0.3	20	21	16
10	1	11.0 ± 0.0	11	11	16
10	2	10.0 ± 0.0	10	10	16

Sensus S-38697

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
10	1	10.7 ± 0.5	10	11	15
10	2	10.0 ± 0.0	10	10	15
20	1	20.5 ± 0.5	20	21	15
20	2	20.0 ± 0.0	20	20	16
30	1	31.0 ± 0.0	31	31	15
30	2	30.0 ± 0.0	30	30	15
40	1	41.0 ± 0.0	41	41	15
40	2	40.2 ± 0.4	40	41	15
50	1	51.0 ± 0.0	51	51	30
50	2	50.6 ± 0.5	50	51	31
60	1	60.0 ± 0.0	60	60	15
60	2	60.0 ± 0.0	60	60	15
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	15
80	1	81.0 ± 0.0	81	81	15
80	2	81.0 ± 0.0	81	81	15
90	1	90.0 ± 0.0	90	90	15
90	2	90.0 ± 0.0	90	90	15
100	1	100.0 ± 0.2	100	101	30
100	2	100.0 ± 0.0	100	100	30
110	1	110.0 ± 0.0	110	110	15
110	2	110.0 ± 0.0	110	110	15
120	1	120.0 ± 0.0	120	120	16
120	2	120.0 ± 0.0	120	120	15
130	1	130.0 ± 0.0	130	130	15
130	2	130.0 ± 0.0	130	130	15
140	1	140.0 ± 0.0	140	140	15
140	2	140.0 ± 0.0	140	140	16
150	1	150.0 ± 0.0	150	150	31
150	2	150.0 ± 0.0	150	150	30
160	1	159.9 ± 0.3	159	160	15
160	2	159.0 ± 0.0	159	159	15
170	1	170.0 ± 0.0	170	170	15
170	2	169.0 ± 0.0	169	169	15
180	1	180.0 ± 0.0	180	180	15
180	2	180.0 ± 0.0	180	180	15
190	1	190.0 ± 0.0	190	190	15
190	2	189.0 ± 0.0	189	189	16
200	1	200.0 ± 0.0	200	200	30
200	2	199.0 ± 0.0	199	199	31
190	1	190.0 ± 0.0	190	190	16
190	2	189.0 ± 0.0	189	189	16

Sensus S-38697 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	180.0 ± 0.0	180	180	16
180	2	180.0 ± 0.0	180	180	16
170	1	169.9 ± 0.3	169	170	16
170	2	169.0 ± 0.0	169	169	17
160	1	160.0 ± 0.0	160	160	16
160	2	159.0 ± 0.0	159	159	16
150	1	150.0 ± 0.0	150	150	32
150	2	150.0 ± 0.0	150	150	32
140	1	140.0 ± 0.0	140	140	16
140	2	140.0 ± 0.0	140	140	16
130	1	130.0 ± 0.0	130	130	16
130	2	130.0 ± 0.0	130	130	16
120	1	120.0 ± 0.0	120	120	17
120	2	120.0 ± 0.0	120	120	17
110	1	110.0 ± 0.0	110	110	16
110	2	110.0 ± 0.0	110	110	16
100	1	100.0 ± 0.0	100	100	31
100	2	100.0 ± 0.0	100	100	32
90	1	90.0 ± 0.0	90	90	16
90	2	90.0 ± 0.0	90	90	17
80	1	81.0 ± 0.0	81	81	16
80	2	80.9 ± 0.3	80	81	16
70	1	71.0 ± 0.0	71	71	16
70	2	70.7 ± 0.5	70	71	15
60	1	60.0 ± 0.0	60	60	16
60	2	60.0 ± 0.0	60	60	16
50	1	51.0 ± 0.0	51	51	32
50	2	50.0 ± 0.0	50	50	31
40	1	41.0 ± 0.0	41	41	17
40	2	40.1 ± 0.3	40	41	16
30	1	30.9 ± 0.4	30	31	15
30	2	30.0 ± 0.0	30	30	16
20	1	20.3 ± 0.5	20	21	16
20	2	20.0 ± 0.0	20	20	17
10	1	10.6 ± 0.5	10	11	16
10	2	10.0 ± 0.0	10	10	17

Sensus S-38699

Actual Depth	Run #	Avg Depth \pm SD	Min Depth	Max Depth	# of Samples
10	1	10.9 \pm 0.3	10	11	16
10	2	10.0 \pm 0.0	10	10	15
20	1	21.0 \pm 0.0	21	21	15
20	2	20.0 \pm 0.0	20	20	15
30	1	31.0 \pm 0.0	31	31	15
30	2	30.6 \pm 0.5	30	31	14
40	1	41.0 \pm 0.0	41	41	15
40	2	41.0 \pm 0.0	41	41	16
50	1	51.0 \pm 0.0	51	51	31
50	2	51.0 \pm 0.0	51	51	30
60	1	60.0 \pm 0.0	60	60	15
60	2	60.0 \pm 0.0	60	60	15
70	1	71.0 \pm 0.0	71	71	15
70	2	71.0 \pm 0.0	71	71	15
80	1	81.0 \pm 0.0	81	81	15
80	2	81.0 \pm 0.0	81	81	15
90	1	91.0 \pm 0.0	91	91	16
90	2	90.0 \pm 0.0	90	90	15
100	1	101.0 \pm 0.0	101	101	30
100	2	100.1 \pm 0.3	100	101	31
110	1	111.0 \pm 0.0	111	111	15
110	2	110.3 \pm 0.5	110	111	14
120	1	120.0 \pm 0.0	120	120	16
120	2	120.0 \pm 0.0	120	120	15
130	1	130.0 \pm 0.0	130	130	15
130	2	130.0 \pm 0.0	130	130	16
140	1	141.0 \pm 0.0	141	141	15
140	2	140.0 \pm 0.0	140	140	16
150	1	150.6 \pm 0.5	150	151	31
150	2	150.0 \pm 0.0	150	150	30
160	1	160.0 \pm 0.0	160	160	15
160	2	160.0 \pm 0.0	160	160	15
170	1	171.0 \pm 0.0	171	171	15
170	2	170.0 \pm 0.0	170	170	16
180	1	181.0 \pm 0.0	181	181	15
180	2	180.0 \pm 0.0	180	180	15
190	1	190.0 \pm 0.0	190	190	15
190	2	190.0 \pm 0.0	190	190	15
200	1	200.0 \pm 0.0	200	200	31
200	2	200.0 \pm 0.0	200	200	31
190	1	190.0 \pm 0.0	190	190	16
190	2	190.0 \pm 0.0	190	190	16

Sensus S-38699 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	181.0 ± 0.0	181	181	17
180	2	180.0 ± 0.0	180	180	17
170	1	170.9 ± 0.3	170	171	14
170	2	170.0 ± 0.0	170	170	16
160	1	160.0 ± 0.0	160	160	17
160	2	160.0 ± 0.0	160	160	17
150	1	150.3 ± 0.4	150	151	30
150	2	150.0 ± 0.0	150	150	32
140	1	140.2 ± 0.4	140	141	17
140	2	140.0 ± 0.0	140	140	17
130	1	130.0 ± 0.0	130	130	17
130	2	130.1 ± 0.3	130	131	18
120	1	120.0 ± 0.0	120	120	16
120	2	120.0 ± 0.0	120	120	17
110	1	111.0 ± 0.0	111	111	17
110	2	110.0 ± 0.0	110	110	17
100	1	101.0 ± 0.0	101	101	32
100	2	100.0 ± 0.0	100	100	31
90	1	91.0 ± 0.0	91	91	16
90	2	90.0 ± 0.0	90	90	16
80	1	81.0 ± 0.0	81	81	17
80	2	81.0 ± 0.0	81	81	17
70	1	71.0 ± 0.0	71	71	16
70	2	71.0 ± 0.0	71	71	16
60	1	60.0 ± 0.0	60	60	17
60	2	60.0 ± 0.0	60	60	17
50	1	51.0 ± 0.0	51	51	31
50	2	51.0 ± 0.2	50	51	32
40	1	41.0 ± 0.0	41	41	16
40	2	40.9 ± 0.3	40	41	16
30	1	31.0 ± 0.0	31	31	16
30	2	30.1 ± 0.2	30	31	16
20	1	20.7 ± 0.5	20	21	16
20	2	20.0 ± 0.0	20	20	11
10	1	10.7 ± 0.5	10	11	15

Sensus S-38704

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
10	1	11.0 ± 0.0	11	11	15
10	2	10.0 ± 0.0	10	10	15
20	1	21.0 ± 0.0	21	21	15
20	2	20.4 ± 0.5	20	21	14
30	1	31.0 ± 0.0	31	31	16
30	2	30.9 ± 0.3	30	31	15
40	1	41.0 ± 0.0	41	41	15
40	2	41.0 ± 0.0	41	41	15
50	1	51.0 ± 0.0	51	51	30
50	2	51.0 ± 0.0	51	51	30
60	1	60.7 ± 0.5	60	61	15
60	2	60.0 ± 0.0	60	60	15
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	15
80	1	81.0 ± 0.0	81	81	16
80	2	81.0 ± 0.0	81	81	15
90	1	91.0 ± 0.0	91	91	15
90	2	90.8 ± 0.4	90	91	14
100	1	101.0 ± 0.0	101	101	30
100	2	100.8 ± 0.4	100	101	31
110	1	111.0 ± 0.0	111	111	15
110	2	110.1 ± 0.4	110	111	15
120	1	120.0 ± 0.0	120	120	15
120	2	120.0 ± 0.0	120	120	16
130	1	130.4 ± 0.5	130	131	15
130	2	130.0 ± 0.0	130	130	15
140	1	141.0 ± 0.0	141	141	15
140	2	140.0 ± 0.0	140	140	15
150	1	151.0 ± 0.0	151	151	31
150	2	150.0 ± 0.0	150	150	30
160	1	160.0 ± 0.0	160	160	15
160	2	160.0 ± 0.0	160	160	15
170	1	171.0 ± 0.0	171	171	15
170	2	170.0 ± 0.0	170	170	15
180	1	181.0 ± 0.0	181	181	15
180	2	180.1 ± 0.4	180	181	15
190	1	190.0 ± 0.0	190	190	15
190	2	190.0 ± 0.0	190	190	16
200	1	200.0 ± 0.0	200	200	31
200	2	200.0 ± 0.0	200	200	31
190	1	190.0 ± 0.0	190	190	17
190	2	190.0 ± 0.0	190	190	17

Sensus S-38704 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	181.0 ± 0.0	181	181	16
180	2	180.0 ± 0.0	180	180	16
170	1	171.0 ± 0.0	171	171	16
170	2	170.0 ± 0.0	170	170	16
160	1	160.0 ± 0.0	160	160	16
160	2	160.0 ± 0.0	160	160	16
150	1	151.0 ± 0.0	151	151	31
150	2	150.0 ± 0.0	150	150	31
140	1	140.9 ± 0.3	140	141	15
140	2	140.0 ± 0.0	140	140	16
130	1	130.0 ± 0.0	130	130	16
130	2	130.0 ± 0.0	130	130	17
120	1	120.0 ± 0.0	120	120	17
120	2	120.0 ± 0.0	120	120	17
110	1	111.0 ± 0.0	111	111	16
110	2	110.0 ± 0.0	110	110	15
100	1	101.0 ± 0.0	101	101	31
100	2	100.5 ± 0.5	100	101	32
90	1	91.0 ± 0.0	91	91	17
90	2	90.6 ± 0.5	90	91	16
80	1	81.0 ± 0.0	81	81	16
80	2	81.0 ± 0.0	81	81	17
70	1	71.0 ± 0.0	71	71	16
70	2	71.0 ± 0.0	71	71	16
60	1	60.3 ± 0.5	60	61	15
60	2	60.0 ± 0.0	60	60	16
50	1	51.0 ± 0.0	51	51	32
50	2	51.0 ± 0.0	51	51	31
40	1	41.1 ± 0.3	41	42	18
40	2	41.0 ± 0.0	41	41	16
30	1	31.0 ± 0.0	31	31	16
30	2	30.7 ± 0.5	30	31	15
20	1	21.0 ± 0.0	21	21	16
20	2	20.2 ± 0.4	20	21	17
10	1	11.1 ± 0.3	11	12	18
10	2	10.0 ± 0.0	10	10	17

Sensus S-38707

Actual Depth	Run #	Avg Depth \pm SD	Min Depth	Max Depth	# of Samples
10	1	11.0 \pm 0.0	11	11	15
10	2	10.4 \pm 0.5	10	11	14
20	1	21.0 \pm 0.0	21	21	16
20	2	20.3 \pm 0.5	20	21	15
30	1	31.0 \pm 0.0	31	31	15
30	2	31.0 \pm 0.0	31	31	15
40	1	41.0 \pm 0.0	41	41	15
40	2	41.0 \pm 0.0	41	41	16
50	1	51.0 \pm 0.0	51	51	30
50	2	51.0 \pm 0.0	51	51	31
60	1	60.9 \pm 0.3	60	61	15
60	2	60.0 \pm 0.0	60	60	15
70	1	71.0 \pm 0.0	71	71	15
70	2	71.0 \pm 0.0	71	71	15
80	1	81.0 \pm 0.0	81	81	15
80	2	81.0 \pm 0.0	81	81	15
90	1	91.0 \pm 0.0	91	91	15
90	2	90.1 \pm 0.3	90	91	15
100	1	101.0 \pm 0.0	101	101	31
100	2	100.0 \pm 0.0	100	100	30
110	1	111.0 \pm 0.0	111	111	15
110	2	110.0 \pm 0.0	110	110	16
120	1	120.0 \pm 0.0	120	120	16
120	2	120.0 \pm 0.0	120	120	15
130	1	130.0 \pm 0.0	130	130	15
130	2	130.0 \pm 0.0	130	130	15
140	1	140.9 \pm 0.3	140	141	15
140	2	140.0 \pm 0.0	140	140	16
150	1	150.4 \pm 0.5	150	151	30
150	2	150.0 \pm 0.0	150	150	30
160	1	160.0 \pm 0.0	160	160	15
160	2	160.0 \pm 0.0	160	160	15
170	1	171.0 \pm 0.0	171	171	15
170	2	170.0 \pm 0.0	170	170	15
180	1	181.0 \pm 0.0	181	181	15
180	2	180.0 \pm 0.0	180	180	16
190	1	190.0 \pm 0.0	190	190	16
190	2	190.0 \pm 0.0	190	190	15
200	1	200.0 \pm 0.0	200	200	31
200	2	200.0 \pm 0.0	200	200	31
190	1	190.1 \pm 0.3	190	191	18
190	2	190.0 \pm 0.0	190	190	17

Sensus S-38707 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	180.9 ± 0.2	180	181	16
180	2	180.0 ± 0.0	180	180	17
170	1	170.9 ± 0.3	170	171	15
170	2	170.0 ± 0.0	170	170	16
160	1	160.0 ± 0.0	160	160	16
160	2	160.0 ± 0.0	160	160	17
150	1	150.0 ± 0.2	150	151	30
150	2	150.0 ± 0.0	150	150	31
140	1	140.2 ± 0.4	140	141	16
140	2	140.0 ± 0.0	140	140	16
130	1	130.0 ± 0.0	130	130	16
130	2	130.0 ± 0.0	130	130	17
120	1	120.0 ± 0.0	120	120	17
120	2	120.0 ± 0.0	120	120	17
110	1	111.0 ± 0.0	111	111	16
110	2	110.0 ± 0.0	110	110	17
100	1	101.0 ± 0.0	101	101	32
100	2	100.5 ± 0.5	100	101	33
90	1	91.0 ± 0.0	91	91	17
90	2	90.0 ± 0.0	90	90	16
80	1	81.0 ± 0.0	81	81	17
80	2	81.0 ± 0.0	81	81	17
70	1	71.0 ± 0.0	71	71	16
70	2	71.1 ± 0.3	71	72	17
60	1	60.1 ± 0.2	60	61	16
60	2	60.0 ± 0.0	60	60	17
50	1	51.0 ± 0.0	51	51	31
50	2	51.0 ± 0.0	51	51	31
40	1	41.0 ± 0.0	41	41	16
40	2	41.0 ± 0.0	41	41	17
30	1	31.0 ± 0.0	31	31	16
30	2	31.0 ± 0.0	31	31	17
20	1	21.0 ± 0.0	21	21	17
20	2	20.4 ± 0.5	20	21	16
10	1	10.9 ± 0.3	10	11	16
10	2	10.0 ± 0.0	10	10	16

Sensus S-38716

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
10	1	11.0 ± 0.0	11	11	14
10	2	10.0 ± 0.0	10	10	15
20	1	21.0 ± 0.0	21	21	16
20	2	20.0 ± 0.0	20	20	15
30	1	31.0 ± 0.0	31	31	15
30	2	30.1 ± 0.4	30	31	15
40	1	41.0 ± 0.0	41	41	15
40	2	40.9 ± 0.3	40	41	15
50	1	51.0 ± 0.0	51	51	30
50	2	51.0 ± 0.0	51	51	31
60	1	60.0 ± 0.0	60	60	15
60	2	60.0 ± 0.0	60	60	15
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	15
80	1	81.0 ± 0.0	81	81	15
80	2	81.0 ± 0.0	81	81	15
90	1	91.0 ± 0.0	91	91	15
90	2	90.0 ± 0.0	90	90	15
100	1	101.0 ± 0.0	101	101	31
100	2	100.0 ± 0.0	100	100	30
110	1	111.0 ± 0.0	111	111	15
110	2	110.0 ± 0.0	110	110	16
120	1	120.0 ± 0.0	120	120	16
120	2	120.0 ± 0.0	120	120	16
130	1	130.0 ± 0.0	130	130	15
130	2	130.0 ± 0.0	130	130	15
140	1	140.0 ± 0.0	140	140	15
140	2	140.0 ± 0.0	140	140	16
150	1	150.0 ± 0.2	150	151	30
150	2	150.0 ± 0.0	150	150	31
160	1	160.0 ± 0.0	160	160	15
160	2	160.0 ± 0.0	160	160	15
170	1	170.5 ± 0.5	170	171	15
170	2	169.9 ± 0.4	169	170	15
180	1	180.8 ± 0.4	180	181	15
180	2	180.0 ± 0.0	180	180	16
190	1	190.0 ± 0.0	190	190	16
190	2	190.0 ± 0.0	190	190	15
200	1	200.0 ± 0.0	200	200	30
200	2	200.0 ± 0.0	200	200	30
190	1	190.0 ± 0.0	190	190	17
190	2	189.9 ± 0.2	189	190	16

Sensus S-38716 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	180.1 ± 0.4	180	181	15
180	2	180.0 ± 0.0	180	180	16
170	1	170.0 ± 0.0	170	170	16
170	2	169.7 ± 0.5	169	170	15
160	1	160.0 ± 0.0	160	160	16
160	2	159.7 ± 0.5	159	160	15
150	1	150.0 ± 0.2	150	151	31
150	2	150.0 ± 0.0	150	150	31
140	1	140.0 ± 0.0	140	140	16
140	2	140.0 ± 0.0	140	140	16
130	1	130.0 ± 0.0	130	130	16
130	2	130.0 ± 0.0	130	130	16
120	1	120.0 ± 0.0	120	120	17
120	2	120.0 ± 0.0	120	120	17
110	1	111.0 ± 0.0	111	111	16
110	2	110.0 ± 0.0	110	110	16
100	1	101.0 ± 0.0	101	101	31
100	2	100.0 ± 0.0	100	100	32
90	1	90.9 ± 0.2	90	91	16
90	2	90.0 ± 0.0	90	90	17
80	1	81.0 ± 0.0	81	81	16
80	2	81.0 ± 0.0	81	81	17
70	1	71.0 ± 0.0	71	71	16
70	2	71.0 ± 0.0	71	71	16
60	1	60.0 ± 0.0	60	60	16
60	2	60.0 ± 0.0	60	60	16
50	1	51.0 ± 0.0	51	51	32
50	2	50.8 ± 0.4	50	51	31
40	1	41.0 ± 0.0	41	41	16
40	2	40.7 ± 0.5	40	41	15
30	1	31.0 ± 0.0	31	31	16
30	2	30.0 ± 0.0	30	30	16
20	1	20.6 ± 0.5	20	21	15
20	2	20.0 ± 0.0	20	20	17
10	1	10.7 ± 0.5	10	11	16
10	2	10.0 ± 0.0	10	10	17

Sensus S-38719

Actual Depth	Run #	Avg Depth \pm SD	Min Depth	Max Depth	# of Samples
10	1	11.0 \pm 0.0	11	11	14
10	2	10.0 \pm 0.0	10	10	15
20	1	21.0 \pm 0.0	21	21	15
20	2	20.0 \pm 0.0	20	20	16
30	1	31.0 \pm 0.0	31	31	15
30	2	30.9 \pm 0.4	30	31	15
40	1	41.0 \pm 0.0	41	41	15
40	2	41.0 \pm 0.0	41	41	16
50	1	51.0 \pm 0.0	51	51	31
50	2	51.0 \pm 0.0	51	51	30
60	1	60.0 \pm 0.0	60	60	15
60	2	60.0 \pm 0.0	60	60	15
70	1	71.0 \pm 0.0	71	71	15
70	2	71.0 \pm 0.0	71	71	15
80	1	81.0 \pm 0.0	81	81	15
80	2	81.0 \pm 0.0	81	81	15
90	1	91.0 \pm 0.0	91	91	16
90	2	90.1 \pm 0.3	90	91	15
100	1	101.0 \pm 0.0	101	101	30
100	2	100.4 \pm 0.5	100	101	31
110	1	111.0 \pm 0.0	111	111	15
110	2	110.1 \pm 0.3	110	111	15
120	1	120.0 \pm 0.0	120	120	16
120	2	120.0 \pm 0.0	120	120	15
130	1	130.0 \pm 0.0	130	130	15
130	2	130.0 \pm 0.0	130	130	15
140	1	140.9 \pm 0.3	140	141	15
140	2	140.0 \pm 0.0	140	140	16
150	1	151.0 \pm 0.0	151	151	30
150	2	150.0 \pm 0.0	150	150	30
160	1	160.0 \pm 0.0	160	160	15
160	2	160.0 \pm 0.0	160	160	15
170	1	171.0 \pm 0.0	171	171	15
170	2	170.0 \pm 0.0	170	170	15
180	1	181.0 \pm 0.0	181	181	15
180	2	180.0 \pm 0.0	180	180	15
190	1	190.0 \pm 0.0	190	190	15
190	2	190.0 \pm 0.0	190	190	15
200	1	200.4 \pm 0.5	200	201	30
200	2	200.0 \pm 0.0	200	200	31
190	1	190.0 \pm 0.0	190	190	16
190	2	190.0 \pm 0.0	190	190	16

Sensus S-38719 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	181.0 ± 0.0	181	181	17
180	2	180.0 ± 0.0	180	180	17
170	1	171.0 ± 0.0	171	171	15
170	2	170.0 ± 0.0	170	170	16
160	1	160.0 ± 0.0	160	160	17
160	2	160.0 ± 0.0	160	160	17
150	1	151.0 ± 0.0	151	151	31
150	2	150.0 ± 0.0	150	150	32
140	1	140.5 ± 0.5	140	141	17
140	2	140.0 ± 0.0	140	140	17
130	1	130.0 ± 0.0	130	130	17
130	2	130.0 ± 0.0	130	130	16
120	1	120.0 ± 0.0	120	120	16
120	2	120.0 ± 0.0	120	120	17
110	1	111.0 ± 0.0	111	111	17
110	2	110.0 ± 0.0	110	110	17
100	1	101.0 ± 0.0	101	101	32
100	2	100.3 ± 0.4	100	101	31
90	1	91.0 ± 0.0	91	91	16
90	2	90.0 ± 0.0	90	90	16
80	1	81.0 ± 0.0	81	81	17
80	2	81.0 ± 0.0	81	81	17
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	16
60	1	59.9 ± 0.4	59	61	18
60	2	60.0 ± 0.0	60	60	17
50	1	51.0 ± 0.0	51	51	31
50	2	51.0 ± 0.0	51	51	32
40	1	41.0 ± 0.0	41	41	16
40	2	41.0 ± 0.0	41	41	17
30	1	31.0 ± 0.0	31	31	16
30	2	30.6 ± 0.5	30	31	16
20	1	20.9 ± 0.3	20	21	16
20	2	20.0 ± 0.0	20	20	16
10	1	10.7 ± 0.5	10	11	15
10	2	10.0 ± 0.0	10	10	16

Sensus S-38727

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
10	1	11.0 ± 0.0	11	11	15
10	2	10.0 ± 0.0	10	10	15
20	1	21.0 ± 0.0	21	21	16
20	2	20.0 ± 0.0	20	20	16
30	1	31.0 ± 0.0	31	31	15
30	2	30.9 ± 0.3	30	31	15
40	1	41.0 ± 0.0	41	41	15
40	2	41.0 ± 0.0	41	41	16
50	1	51.0 ± 0.0	51	51	30
50	2	51.0 ± 0.0	51	51	31
60	1	60.0 ± 0.0	60	60	15
60	2	60.0 ± 0.0	60	60	15
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	15
80	1	81.0 ± 0.0	81	81	15
80	2	81.0 ± 0.0	81	81	15
90	1	91.0 ± 0.0	91	91	15
90	2	90.2 ± 0.4	90	91	15
100	1	101.0 ± 0.0	101	101	31
100	2	100.2 ± 0.4	100	101	30
110	1	111.0 ± 0.0	111	111	15
110	2	110.0 ± 0.0	110	110	16
120	1	120.0 ± 0.0	120	120	16
120	2	120.0 ± 0.0	120	120	16
130	1	130.1 ± 0.4	130	131	15
130	2	130.0 ± 0.0	130	130	15
140	1	140.5 ± 0.5	140	141	15
140	2	140.0 ± 0.0	140	140	16
150	1	150.9 ± 0.3	150	151	30
150	2	150.0 ± 0.0	150	150	31
160	1	160.0 ± 0.0	160	160	15
160	2	160.0 ± 0.0	160	160	15
170	1	171.0 ± 0.0	171	171	15
170	2	170.0 ± 0.0	170	170	15
180	1	181.0 ± 0.0	181	181	15
180	2	180.0 ± 0.0	180	180	16
190	1	190.0 ± 0.0	190	190	16
190	2	190.0 ± 0.0	190	190	15
200	1	200.0 ± 0.0	200	200	31
200	2	200.0 ± 0.0	200	200	31
190	1	190.0 ± 0.0	190	190	16
190	2	190.0 ± 0.0	190	190	16

Sensus S-38727 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	181.0 ± 0.0	181	181	17
180	2	180.0 ± 0.0	180	180	17
170	1	171.0 ± 0.0	171	171	16
170	2	170.1 ± 0.3	170	171	18
160	1	160.0 ± 0.0	160	160	17
160	2	160.0 ± 0.0	160	160	17
150	1	150.4 ± 0.5	150	151	30
150	2	150.0 ± 0.0	150	150	31
140	1	140.1 ± 0.2	140	141	16
140	2	140.0 ± 0.0	140	140	17
130	1	130.0 ± 0.0	130	130	17
130	2	130.0 ± 0.0	130	130	17
120	1	120.0 ± 0.0	120	120	17
120	2	120.0 ± 0.0	120	120	16
110	1	111.0 ± 0.0	111	111	17
110	2	110.0 ± 0.0	110	110	17
100	1	101.0 ± 0.0	101	101	32
100	2	100.2 ± 0.4	100	101	32
90	1	91.0 ± 0.0	91	91	17
90	2	90.1 ± 0.2	90	91	16
80	1	81.0 ± 0.0	81	81	17
80	2	81.0 ± 0.0	81	81	17
70	1	71.0 ± 0.0	71	71	16
70	2	71.1 ± 0.3	71	72	18
60	1	60.0 ± 0.0	60	60	16
60	2	60.0 ± 0.0	60	60	17
50	1	51.0 ± 0.0	51	51	31
50	2	51.0 ± 0.0	51	51	31
40	1	41.0 ± 0.0	41	41	16
40	2	41.0 ± 0.0	41	41	17
30	1	31.0 ± 0.0	31	31	16
30	2	30.8 ± 0.4	30	31	16
20	1	21.0 ± 0.0	21	21	17
20	2	20.3 ± 0.5	20	21	18
10	1	10.8 ± 0.4	10	11	15
10	2	10.0 ± 0.0	10	10	16

Sensus S-38730

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
10	1	10.9 ± 0.3	10	11	14
10	2	10.0 ± 0.0	10	10	15
20	1	21.0 ± 0.0	21	21	16
20	2	20.0 ± 0.0	20	20	15
30	1	31.0 ± 0.0	31	31	15
30	2	30.1 ± 0.4	30	31	15
40	1	41.0 ± 0.0	41	41	15
40	2	40.7 ± 0.5	40	41	15
50	1	51.0 ± 0.0	51	51	30
50	2	51.0 ± 0.0	51	51	31
60	1	60.0 ± 0.0	60	60	15
60	2	60.0 ± 0.0	60	60	15
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	15
80	1	81.0 ± 0.0	81	81	15
80	2	81.0 ± 0.0	81	81	15
90	1	91.0 ± 0.0	91	91	15
90	2	90.0 ± 0.0	90	90	15
100	1	101.0 ± 0.0	101	101	30
100	2	100.0 ± 0.0	100	100	30
110	1	111.0 ± 0.0	111	111	14
110	2	110.0 ± 0.0	110	110	16
120	1	120.0 ± 0.0	120	120	16
120	2	120.0 ± 0.0	120	120	16
130	1	130.0 ± 0.0	130	130	15
130	2	130.0 ± 0.0	130	130	15
140	1	140.2 ± 0.4	140	141	15
140	2	140.0 ± 0.0	140	140	15
150	1	150.6 ± 0.5	150	151	30
150	2	150.0 ± 0.0	150	150	31
160	1	160.0 ± 0.0	160	160	14
160	2	160.0 ± 0.0	160	160	15
170	1	171.0 ± 0.0	171	171	15
170	2	170.0 ± 0.0	170	170	15
180	1	181.0 ± 0.0	181	181	16
180	2	180.0 ± 0.0	180	180	15
190	1	190.0 ± 0.0	190	190	15
190	2	190.0 ± 0.0	190	190	15
200	1	200.0 ± 0.0	200	200	30
200	2	200.0 ± 0.0	200	200	30
190	1	190.0 ± 0.0	190	190	17
190	2	190.0 ± 0.0	190	190	17

Sensus S-38730 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	180.7 ± 0.5	180	181	15
180	2	180.0 ± 0.0	180	180	16
170	1	171.0 ± 0.0	171	171	16
170	2	170.0 ± 0.0	170	170	16
160	1	160.0 ± 0.0	160	160	16
160	2	160.0 ± 0.0	160	160	16
150	1	150.1 ± 0.3	150	151	30
150	2	150.0 ± 0.0	150	150	31
140	1	140.1 ± 0.3	140	141	16
140	2	140.0 ± 0.0	140	140	16
130	1	130.0 ± 0.0	130	130	16
130	2	130.0 ± 0.0	130	130	17
120	1	120.0 ± 0.0	120	120	17
120	2	120.0 ± 0.0	120	120	17
110	1	111.0 ± 0.0	111	111	16
110	2	110.0 ± 0.0	110	110	16
100	1	101.0 ± 0.0	101	101	31
100	2	100.0 ± 0.0	100	100	32
90	1	91.0 ± 0.0	91	91	17
90	2	90.1 ± 0.2	90	91	17
80	1	81.0 ± 0.0	81	81	16
80	2	81.0 ± 0.0	81	81	17
70	1	71.0 ± 0.0	71	71	16
70	2	71.0 ± 0.0	71	71	16
60	1	60.0 ± 0.0	60	60	16
60	2	60.0 ± 0.0	60	60	16
50	1	51.0 ± 0.0	51	51	32
50	2	51.0 ± 0.0	51	51	31
40	1	41.0 ± 0.0	41	41	17
40	2	40.6 ± 0.5	40	41	15
30	1	31.0 ± 0.0	31	31	16
30	2	30.3 ± 0.5	30	31	15
20	1	20.5 ± 0.5	20	21	15
20	2	20.0 ± 0.0	20	20	17
10	1	10.8 ± 0.4	10	11	16
10	2	10.0 ± 0.0	10	10	17

Sensus S-38733

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
10	1	10.0 ± 0.0	10	10	16
10	2	10.0 ± 0.0	10	10	15
20	1	21.0 ± 0.0	21	21	14
20	2	20.0 ± 0.0	20	20	15
30	1	31.0 ± 0.0	31	31	16
30	2	30.6 ± 0.5	30	31	16
40	1	41.0 ± 0.0	41	41	15
40	2	40.3 ± 0.5	40	41	16
50	1	51.0 ± 0.0	51	51	30
50	2	50.9 ± 0.3	50	51	30
60	1	60.0 ± 0.0	60	60	15
60	2	60.0 ± 0.0	60	60	15
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	15
80	1	81.0 ± 0.0	81	81	16
80	2	81.0 ± 0.0	81	81	15
90	1	91.0 ± 0.0	91	91	15
90	2	90.0 ± 0.0	90	90	15
100	1	100.7 ± 0.5	100	101	30
100	2	100.0 ± 0.0	100	100	30
110	1	110.8 ± 0.4	110	111	14
110	2	110.0 ± 0.0	110	110	15
120	1	120.0 ± 0.0	120	120	15
120	2	120.0 ± 0.0	120	120	16
130	1	130.0 ± 0.0	130	130	15
130	2	130.0 ± 0.0	130	130	15
140	1	140.0 ± 0.0	140	140	15
140	2	140.0 ± 0.0	140	140	15
150	1	150.0 ± 0.0	150	150	30
150	2	150.0 ± 0.0	150	150	31
160	1	160.0 ± 0.0	160	160	15
160	2	159.6 ± 0.5	159	160	16
170	1	170.0 ± 0.0	170	170	15
170	2	169.7 ± 0.5	169	170	15
180	1	180.1 ± 0.3	180	181	15
180	2	180.0 ± 0.0	180	180	15
190	1	190.0 ± 0.0	190	190	16
190	2	189.3 ± 0.5	189	190	15
200	1	200.0 ± 0.0	200	200	30
200	2	200.0 ± 0.0	200	200	30
190	1	190.0 ± 0.0	190	190	16
190	2	189.0 ± 0.0	189	189	16

Sensus S-38733 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	180.0 ± 0.0	180	180	16
180	2	180.1 ± 0.3	180	181	18
170	1	170.0 ± 0.0	170	170	16
170	2	169.4 ± 0.5	169	170	17
160	1	160.0 ± 0.0	160	160	16
160	2	159.3 ± 0.5	159	160	15
150	1	150.0 ± 0.0	150	150	32
150	2	150.0 ± 0.0	150	150	32
140	1	140.0 ± 0.0	140	140	16
140	2	140.1 ± 0.3	140	141	18
130	1	130.0 ± 0.0	130	130	16
130	2	130.0 ± 0.0	130	130	16
120	1	120.0 ± 0.0	120	120	17
120	2	120.0 ± 0.0	120	120	17
110	1	110.2 ± 0.4	110	111	17
110	2	110.1 ± 0.3	110	111	18
100	1	100.9 ± 0.3	100	101	30
100	2	100.0 ± 0.0	100	100	31
90	1	90.9 ± 0.3	90	91	15
90	2	90.0 ± 0.0	90	90	16
80	1	81.0 ± 0.0	81	81	16
80	2	81.0 ± 0.0	81	81	16
70	1	71.0 ± 0.0	71	71	16
70	2	71.0 ± 0.0	71	71	16
60	1	60.0 ± 0.0	60	60	17
60	2	60.0 ± 0.0	60	60	16
50	1	51.0 ± 0.0	51	51	32
50	2	50.5 ± 0.5	50	51	32
40	1	41.0 ± 0.0	41	41	17
40	2	40.0 ± 0.0	40	40	16
30	1	31.0 ± 0.0	31	31	17
30	2	30.5 ± 0.5	30	31	15
20	1	20.8 ± 0.4	20	21	15
20	2	20.0 ± 0.0	20	20	16
10	1	10.0 ± 0.0	10	10	16
10	2	10.0 ± 0.0	10	10	17

Sensus S-38734

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
10	1	11.0 ± 0.0	11	11	15
10	2	10.1 ± 0.4	10	11	15
20	1	21.0 ± 0.0	21	21	15
20	2	21.0 ± 0.0	21	21	16
30	1	31.0 ± 0.0	31	31	16
30	2	31.0 ± 0.0	31	31	15
40	1	41.0 ± 0.0	41	41	16
40	2	41.0 ± 0.0	41	41	15
50	1	51.0 ± 0.0	51	51	30
50	2	51.0 ± 0.0	51	51	30
60	1	60.3 ± 0.5	60	61	15
60	2	60.0 ± 0.0	60	60	15
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	15
80	1	81.0 ± 0.0	81	81	15
80	2	81.0 ± 0.0	81	81	15
90	1	91.0 ± 0.0	91	91	15
90	2	90.6 ± 0.5	90	91	16
100	1	101.0 ± 0.0	101	101	30
100	2	100.8 ± 0.4	100	101	30
110	1	111.0 ± 0.0	111	111	15
110	2	110.1 ± 0.4	110	111	15
120	1	120.0 ± 0.0	120	120	15
120	2	120.0 ± 0.0	120	120	16
130	1	130.3 ± 0.5	130	131	15
130	2	130.0 ± 0.0	130	130	15
140	1	140.6 ± 0.5	140	141	14
140	2	140.0 ± 0.0	140	140	15
150	1	151.0 ± 0.0	151	151	30
150	2	150.0 ± 0.0	150	150	30
160	1	160.0 ± 0.0	160	160	15
160	2	160.0 ± 0.0	160	160	15
170	1	171.0 ± 0.0	171	171	15
170	2	170.0 ± 0.0	170	170	15
180	1	181.0 ± 0.0	181	181	15
180	2	180.0 ± 0.0	180	180	15
190	1	190.0 ± 0.0	190	190	15
190	2	190.0 ± 0.0	190	190	16
200	1	200.0 ± 0.0	200	200	31
200	2	200.0 ± 0.0	200	200	30
190	1	190.0 ± 0.0	190	190	16
190	2	190.0 ± 0.0	190	190	17

Sensus S-38734 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	181.0 ± 0.0	181	181	16
180	2	180.0 ± 0.0	180	180	16
170	1	171.0 ± 0.0	171	171	16
170	2	170.0 ± 0.0	170	170	16
160	1	160.0 ± 0.0	160	160	16
160	2	160.0 ± 0.0	160	160	16
150	1	151.0 ± 0.0	151	151	32
150	2	150.0 ± 0.0	150	150	31
140	1	140.9 ± 0.3	140	141	15
140	2	140.0 ± 0.0	140	140	16
130	1	130.0 ± 0.0	130	130	16
130	2	130.0 ± 0.0	130	130	16
120	1	120.0 ± 0.0	120	120	17
120	2	120.0 ± 0.0	120	120	17
110	1	111.0 ± 0.0	111	111	16
110	2	110.0 ± 0.0	110	110	16
100	1	101.0 ± 0.0	101	101	31
100	2	100.7 ± 0.4	100	101	31
90	1	91.0 ± 0.0	91	91	16
90	2	90.6 ± 0.5	90	91	16
80	1	81.0 ± 0.0	81	81	16
80	2	81.0 ± 0.0	81	81	17
70	1	71.0 ± 0.0	71	71	16
70	2	71.0 ± 0.0	71	71	16
60	1	60.9 ± 0.4	60	61	15
60	2	60.0 ± 0.0	60	60	16
50	1	51.0 ± 0.0	51	51	32
50	2	51.0 ± 0.0	51	51	32
40	1	41.0 ± 0.0	41	41	17
40	2	41.0 ± 0.0	41	41	16
30	1	31.0 ± 0.0	31	31	16
30	2	31.0 ± 0.0	31	31	16
20	1	21.0 ± 0.0	21	21	16
20	2	20.9 ± 0.3	20	21	16
10	1	10.9 ± 0.2	10	11	16
10	2	10.0 ± 0.0	10	10	17

Sensus S-38738

Actual Depth	Run #	Avg. Depth ± SD	Min Depth	Max Depth	# of Samples
10	1	11.0 ± 0.0	11	11	15
10	2	10.0 ± 0.0	10	10	15
20	1	21.0 ± 0.0	21	21	16
20	2	21.0 ± 0.0	21	21	15
30	1	31.0 ± 0.0	31	31	15
30	2	31.0 ± 0.0	31	31	15
40	1	41.0 ± 0.0	41	41	15
40	2	41.0 ± 0.0	41	41	15
50	1	51.0 ± 0.0	51	51	30
50	2	51.0 ± 0.0	51	51	31
60	1	60.6 ± 0.5	60	61	16
60	2	60.0 ± 0.0	60	60	15
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	15
80	1	81.0 ± 0.0	81	81	15
80	2	81.0 ± 0.0	81	81	15
90	1	91.0 ± 0.0	91	91	15
90	2	90.1 ± 0.3	90	91	15
100	1	101.0 ± 0.0	101	101	31
100	2	100.0 ± 0.2	100	101	30
110	1	111.0 ± 0.0	111	111	15
110	2	110.0 ± 0.0	110	110	16
120	1	120.0 ± 0.0	120	120	16
120	2	120.0 ± 0.0	120	120	15
130	1	130.0 ± 0.0	130	130	15
130	2	130.0 ± 0.0	130	130	15
140	1	140.7 ± 0.5	140	141	15
140	2	140.0 ± 0.0	140	140	16
150	1	150.6 ± 0.5	150	151	30
150	2	150.0 ± 0.0	150	150	30
160	1	160.0 ± 0.0	160	160	15
160	2	160.0 ± 0.0	160	160	15
170	1	171.0 ± 0.0	171	171	15
170	2	170.0 ± 0.0	170	170	15
180	1	181.0 ± 0.0	181	181	16
180	2	180.0 ± 0.0	180	180	16
190	1	190.0 ± 0.0	190	190	16
190	2	190.0 ± 0.0	190	190	15
200	1	200.0 ± 0.0	200	200	31
200	2	200.0 ± 0.0	200	200	31
190	1	190.1 ± 0.3	190	191	18
190	2	190.0 ± 0.0	190	190	17

Sensus S-38738 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	181.0 ± 0.0	181	181	17
180	2	180.0 ± 0.0	180	180	17
170	1	170.9 ± 0.3	170	171	15
170	2	170.1 ± 0.3	170	171	17
160	1	160.0 ± 0.0	160	160	17
160	2	160.0 ± 0.0	160	160	17
150	1	150.5 ± 0.5	150	151	30
150	2	150.0 ± 0.0	150	150	31
140	1	140.7 ± 0.5	140	141	15
140	2	140.0 ± 0.0	140	140	16
130	1	130.0 ± 0.0	130	130	17
130	2	130.0 ± 0.0	130	130	17
120	1	120.1 ± 0.3	120	121	18
120	2	120.0 ± 0.0	120	120	17
110	1	111.0 ± 0.0	111	111	17
110	2	110.0 ± 0.0	110	110	17
100	1	101.0 ± 0.0	101	101	32
100	2	100.3 ± 0.5	100	101	32
90	1	91.0 ± 0.0	91	91	17
90	2	90.2 ± 0.4	90	91	16
80	1	81.0 ± 0.0	81	81	17
80	2	81.0 ± 0.0	81	81	17
70	1	71.0 ± 0.0	71	71	16
70	2	71.0 ± 0.0	71	71	17
60	1	60.0 ± 0.0	60	60	16
60	2	60.0 ± 0.0	60	60	17
50	1	51.0 ± 0.0	51	51	31
50	2	51.0 ± 0.0	51	51	31
40	1	41.0 ± 0.0	41	41	16
40	2	41.0 ± 0.0	41	41	17
30	1	31.0 ± 0.0	31	31	16
30	2	30.7 ± 0.5	30	31	17
20	1	21.0 ± 0.0	21	21	17
20	2	20.0 ± 0.0	20	20	17
10	1	10.8 ± 0.4	10	11	16
10	2	10.0 ± 0.0	10	10	16

Sensus S-38740

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
10	1	11.0 ± 0.0	11	11	14
10	2	10.4 ± 0.5	10	11	14
20	1	21.0 ± 0.0	21	21	15
20	2	20.8 ± 0.4	20	21	15
30	1	31.0 ± 0.0	31	31	15
30	2	31.0 ± 0.0	31	31	15
40	1	41.0 ± 0.0	41	41	15
40	2	41.0 ± 0.0	41	41	16
50	1	51.0 ± 0.0	51	51	31
50	2	51.0 ± 0.0	51	51	30
60	1	60.3 ± 0.5	60	61	15
60	2	60.0 ± 0.0	60	60	15
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	15
80	1	81.0 ± 0.0	81	81	15
80	2	81.0 ± 0.0	81	81	15
90	1	91.0 ± 0.0	91	91	16
90	2	90.0 ± 0.0	90	90	15
100	1	101.0 ± 0.0	101	101	30
100	2	100.0 ± 0.0	100	100	30
110	1	111.0 ± 0.0	111	111	15
110	2	110.0 ± 0.0	110	110	15
120	1	120.0 ± 0.0	120	120	16
120	2	120.0 ± 0.0	120	120	15
130	1	130.0 ± 0.0	130	130	15
130	2	130.0 ± 0.0	130	130	15
140	1	140.0 ± 0.0	140	140	15
140	2	140.0 ± 0.0	140	140	16
150	1	150.2 ± 0.4	150	151	30
150	2	150.0 ± 0.0	150	150	30
160	1	160.0 ± 0.0	160	160	15
160	2	160.0 ± 0.0	160	160	15
170	1	170.7 ± 0.5	170	171	14
170	2	170.0 ± 0.0	170	170	15
180	1	181.0 ± 0.0	181	181	15
180	2	180.0 ± 0.0	180	180	15
190	1	190.0 ± 0.0	190	190	15
190	2	190.0 ± 0.0	190	190	15
200	1	200.0 ± 0.0	200	200	31
200	2	200.0 ± 0.0	200	200	31
190	1	190.0 ± 0.0	190	190	16
190	2	190.1 ± 0.3	190	191	18

Sensus S-38740 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	180.9 ± 0.2	180	181	16
180	2	180.0 ± 0.0	180	180	17
170	1	170.9 ± 0.3	170	171	16
170	2	170.0 ± 0.0	170	170	17
160	1	160.0 ± 0.0	160	160	16
160	2	160.0 ± 0.0	160	160	17
150	1	150.5 ± 0.5	150	151	30
150	2	150.0 ± 0.0	150	150	31
140	1	140.1 ± 0.2	140	141	16
140	2	140.0 ± 0.0	140	140	17
130	1	130.0 ± 0.0	130	130	17
130	2	130.0 ± 0.0	130	130	17
120	1	120.1 ± 0.3	120	121	18
120	2	120.0 ± 0.0	120	120	17
110	1	111.0 ± 0.0	111	111	17
110	2	110.0 ± 0.0	110	110	17
100	1	101.0 ± 0.0	101	101	32
100	2	100.0 ± 0.0	100	100	31
90	1	91.0 ± 0.0	91	91	16
90	2	90.0 ± 0.0	90	90	16
80	1	81.0 ± 0.0	81	81	17
80	2	81.0 ± 0.0	81	81	17
70	1	71.0 ± 0.0	71	71	16
70	2	71.0 ± 0.0	71	71	16
60	1	60.1 ± 0.3	60	61	17
60	2	60.0 ± 0.0	60	60	17
50	1	51.0 ± 0.0	51	51	31
50	2	51.0 ± 0.0	51	51	32
40	1	41.0 ± 0.0	41	41	16
40	2	41.0 ± 0.0	41	41	17
30	1	31.0 ± 0.0	31	31	17
30	2	30.8 ± 0.4	30	31	16
20	1	21.0 ± 0.0	21	21	17
20	2	20.5 ± 0.5	20	21	15
10	1	11.0 ± 0.0	11	11	16
10	2	10.1 ± 0.3	10	11	16

Sensus S-38748

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
10	1	11.0 ± 0.0	11	11	15
10	2	10.0 ± 0.0	10	10	15
20	1	21.0 ± 0.0	21	21	16
20	2	20.3 ± 0.5	20	21	14
30	1	31.0 ± 0.0	31	31	15
30	2	30.3 ± 0.5	30	31	15
40	1	41.0 ± 0.0	41	41	15
40	2	41.0 ± 0.0	41	41	15
50	1	51.0 ± 0.0	51	51	30
50	2	51.0 ± 0.0	51	51	31
60	1	60.0 ± 0.0	60	60	15
60	2	60.0 ± 0.0	60	60	15
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	15
80	1	81.0 ± 0.0	81	81	15
80	2	81.0 ± 0.0	81	81	15
90	1	91.0 ± 0.0	91	91	15
90	2	90.0 ± 0.0	90	90	15
100	1	101.0 ± 0.0	101	101	31
100	2	100.0 ± 0.0	100	100	30
110	1	111.0 ± 0.0	111	111	15
110	2	110.0 ± 0.0	110	110	16
120	1	120.0 ± 0.0	120	120	16
120	2	120.0 ± 0.0	120	120	15
130	1	130.0 ± 0.0	130	130	15
130	2	130.0 ± 0.0	130	130	15
140	1	140.0 ± 0.0	140	140	15
140	2	140.0 ± 0.0	140	140	16
150	1	150.4 ± 0.5	150	151	29
150	2	150.0 ± 0.0	150	150	31
160	1	160.0 ± 0.0	160	160	15
160	2	160.0 ± 0.0	160	160	15
170	1	170.9 ± 0.3	170	171	15
170	2	170.0 ± 0.0	170	170	15
180	1	181.0 ± 0.0	181	181	15
180	2	180.0 ± 0.0	180	180	16
190	1	190.0 ± 0.0	190	190	16
190	2	190.0 ± 0.0	190	190	15
200	1	200.0 ± 0.0	200	200	30
200	2	200.0 ± 0.0	200	200	31
190	1	190.0 ± 0.0	190	190	17
190	2	190.0 ± 0.0	190	190	17

Sensus S-38748 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	180.8 ± 0.4	180	181	16
180	2	180.0 ± 0.0	180	180	17
170	1	170.9 ± 0.3	170	171	15
170	2	170.0 ± 0.0	170	170	16
160	1	160.0 ± 0.0	160	160	16
160	2	159.9 ± 0.3	159	160	15
150	1	150.0 ± 0.2	150	151	30
150	2	150.0 ± 0.0	150	150	31
140	1	140.0 ± 0.0	140	140	16
140	2	140.0 ± 0.0	140	140	16
130	1	130.0 ± 0.0	130	130	16
130	2	130.0 ± 0.0	130	130	16
120	1	120.0 ± 0.0	120	120	17
120	2	120.0 ± 0.0	120	120	17
110	1	111.0 ± 0.0	111	111	16
110	2	110.0 ± 0.0	110	110	17
100	1	101.0 ± 0.0	101	101	32
100	2	100.0 ± 0.0	100	100	32
90	1	91.0 ± 0.0	91	91	17
90	2	90.0 ± 0.0	90	90	17
80	1	81.0 ± 0.0	81	81	17
80	2	81.0 ± 0.0	81	81	17
70	1	71.0 ± 0.0	71	71	16
70	2	71.0 ± 0.0	71	71	16
60	1	60.0 ± 0.0	60	60	16
60	2	60.0 ± 0.0	60	60	16
50	1	51.1 ± 0.2	51	52	33
50	2	51.0 ± 0.0	51	51	31
40	1	41.0 ± 0.0	41	41	16
40	2	40.7 ± 0.5	40	41	15
30	1	31.0 ± 0.0	31	31	16
30	2	30.1 ± 0.2	30	31	17
20	1	20.9 ± 0.3	20	21	15
20	2	20.0 ± 0.0	20	20	17
10	1	10.9 ± 0.4	10	11	15
10	2	10.0 ± 0.0	10	10	16

Sensus S-38749

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
10	1	11.0 ± 0.0	11	11	14
10	2	10.0 ± 0.0	10	10	15
20	1	21.0 ± 0.0	21	21	15
20	2	20.1 ± 0.2	20	21	16
30	1	31.0 ± 0.0	31	31	15
30	2	31.0 ± 0.0	31	31	15
40	1	41.0 ± 0.0	41	41	15
40	2	41.0 ± 0.0	41	41	16
50	1	51.0 ± 0.0	51	51	31
50	2	51.0 ± 0.0	51	51	30
60	1	60.1 ± 0.3	60	61	15
60	2	60.0 ± 0.0	60	60	15
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	15
80	1	81.0 ± 0.0	81	81	15
80	2	81.0 ± 0.0	81	81	15
90	1	91.0 ± 0.0	91	91	16
90	2	90.0 ± 0.0	90	90	15
100	1	101.0 ± 0.0	101	101	30
100	2	100.0 ± 0.0	100	100	31
110	1	111.0 ± 0.0	111	111	15
110	2	110.0 ± 0.0	110	110	15
120	1	120.0 ± 0.0	120	120	16
120	2	120.0 ± 0.0	120	120	15
130	1	130.0 ± 0.0	130	130	15
130	2	130.0 ± 0.0	130	130	15
140	1	140.0 ± 0.0	140	140	15
140	2	140.0 ± 0.0	140	140	16
150	1	150.0 ± 0.2	150	151	31
150	2	150.0 ± 0.0	150	150	30
160	1	160.0 ± 0.0	160	160	15
160	2	160.0 ± 0.0	160	160	15
170	1	170.2 ± 0.4	170	171	15
170	2	170.0 ± 0.0	170	170	16
180	1	180.6 ± 0.5	180	181	14
180	2	180.0 ± 0.0	180	180	15
190	1	190.0 ± 0.0	190	190	15
190	2	190.0 ± 0.0	190	190	15
200	1	200.0 ± 0.0	200	200	31
200	2	200.0 ± 0.0	200	200	31
190	1	190.0 ± 0.0	190	190	16
190	2	190.0 ± 0.0	190	190	16

Sensus S-38749 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	180.1 ± 0.2	180	181	17
180	2	180.0 ± 0.0	180	180	17
170	1	170.0 ± 0.0	170	170	16
170	2	170.0 ± 0.0	170	170	17
160	1	160.0 ± 0.0	160	160	17
160	2	160.0 ± 0.0	160	160	17
150	1	150.0 ± 0.0	150	150	31
150	2	150.0 ± 0.0	150	150	31
140	1	140.0 ± 0.0	140	140	16
140	2	140.0 ± 0.0	140	140	17
130	1	130.0 ± 0.0	130	130	17
130	2	130.0 ± 0.0	130	130	17
120	1	120.0 ± 0.0	120	120	17
120	2	120.0 ± 0.0	120	120	18
110	1	111.0 ± 0.0	111	111	17
110	2	110.0 ± 0.0	110	110	17
100	1	101.0 ± 0.0	101	101	32
100	2	100.0 ± 0.0	100	100	31
90	1	91.0 ± 0.0	91	91	16
90	2	90.0 ± 0.0	90	90	16
80	1	81.0 ± 0.0	81	81	17
80	2	81.0 ± 0.0	81	81	17
70	1	71.0 ± 0.0	71	71	16
70	2	71.0 ± 0.0	71	71	16
60	1	60.0 ± 0.0	60	60	16
60	2	60.0 ± 0.0	60	60	17
50	1	51.0 ± 0.0	51	51	31
50	2	51.0 ± 0.0	51	51	32
40	1	41.0 ± 0.0	41	41	16
40	2	41.0 ± 0.0	41	41	17
30	1	31.0 ± 0.0	31	31	17
30	2	30.7 ± 0.5	30	31	16
20	1	20.9 ± 0.3	20	21	16
20	2	20.0 ± 0.0	20	20	16
10	1	10.9 ± 0.3	10	11	15
10	2	10.0 ± 0.0	10	10	16

Sensus S-38753

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
10	1	11.0 ± 0.0	11	11	15
10	2	10.0 ± 0.0	10	10	15
20	1	21.0 ± 0.0	21	21	15
20	2	20.0 ± 0.0	20	20	15
30	1	31.0 ± 0.0	31	31	16
30	2	30.8 ± 0.4	30	31	16
40	1	41.0 ± 0.0	41	41	15
40	2	41.0 ± 0.0	41	41	15
50	1	51.0 ± 0.0	51	51	30
50	2	51.0 ± 0.0	51	51	30
60	1	60.0 ± 0.0	60	60	15
60	2	60.0 ± 0.0	60	60	15
70	1	71.0 ± 0.0	71	71	15
70	2	71.0 ± 0.0	71	71	15
80	1	81.0 ± 0.0	81	81	16
80	2	81.0 ± 0.0	81	81	15
90	1	91.0 ± 0.0	91	91	15
90	2	90.0 ± 0.0	90	90	15
100	1	101.0 ± 0.0	101	101	30
100	2	100.0 ± 0.0	100	100	30
110	1	110.4 ± 0.5	110	111	15
110	2	110.0 ± 0.0	110	110	15
120	1	120.0 ± 0.0	120	120	15
120	2	120.0 ± 0.0	120	120	16
130	1	130.0 ± 0.0	130	130	15
130	2	130.0 ± 0.0	130	130	15
140	1	140.0 ± 0.0	140	140	15
140	2	140.0 ± 0.0	140	140	15
150	1	150.0 ± 0.0	150	150	30
150	2	150.0 ± 0.0	150	150	31
160	1	160.0 ± 0.0	160	160	15
160	2	160.0 ± 0.0	160	160	15
170	1	170.0 ± 0.0	170	170	15
170	2	169.5 ± 0.5	169	170	15
180	1	180.1 ± 0.4	180	181	15
180	2	180.0 ± 0.0	180	180	15
190	1	190.0 ± 0.0	190	190	15
190	2	190.0 ± 0.0	190	190	16
200	1	200.0 ± 0.0	200	200	30
200	2	199.4 ± 0.5	199	200	31
190	1	190.0 ± 0.0	190	190	16
190	2	189.7 ± 0.5	189	190	15

Sensus S-38753 (cont'd)

Actual Depth	Run #	Avg Depth ± SD	Min Depth	Max Depth	# of Samples
180	1	180.0 ± 0.0	180	180	16
180	2	180.1 ± 0.3	180	181	18
170	1	170.0 ± 0.0	170	170	16
170	2	169.2 ± 0.4	169	170	16
160	1	160.0 ± 0.0	160	160	16
160	2	159.2 ± 0.4	159	160	15
150	1	150.0 ± 0.0	150	150	32
150	2	150.0 ± 0.0	150	150	32
140	1	140.1 ± 0.3	140	141	18
140	2	140.0 ± 0.0	140	140	16
130	1	130.0 ± 0.0	130	130	16
130	2	130.0 ± 0.0	130	130	16
120	1	120.0 ± 0.0	120	120	17
120	2	120.0 ± 0.0	120	120	17
110	1	110.9 ± 0.2	110	111	16
110	2	110.0 ± 0.0	110	110	16
100	1	101.0 ± 0.0	101	101	31
100	2	100.0 ± 0.0	100	100	31
90	1	90.9 ± 0.3	90	91	15
90	2	90.0 ± 0.0	90	90	16
80	1	81.0 ± 0.0	81	81	16
80	2	81.0 ± 0.0	81	81	16
70	1	71.0 ± 0.0	71	71	16
70	2	71.0 ± 0.0	71	71	16
60	1	60.0 ± 0.0	60	60	17
60	2	60.0 ± 0.0	60	60	16
50	1	51.0 ± 0.0	51	51	32
50	2	50.9 ± 0.2	50	51	31
40	1	41.0 ± 0.0	41	41	17
40	2	41.1 ± 0.3	41	42	18
30	1	31.1 ± 0.3	31	32	18
30	2	30.6 ± 0.5	30	31	15
20	1	20.9 ± 0.4	20	21	15
20	2	20.0 ± 0.0	20	20	16
10	1	10.9 ± 0.3	10	11	16
10	2	10.0 ± 0.0	10	10	17

APPENDIX C

DEPTH ACCURACY SUMMARY STATISTICS

Table C-1. Average depth \pm S.D. for data loggers dived on two trials to 200 fsw with holds at each decade of depth during descent and ascent. Actual depth is in column one. The DL serial numbers comprise the remaining column headings. All depths are in fsw.

Depth	S-28690	S-28701	S-28732	S-28733	S-28734
10	10.5 \pm 0.7	10.5 \pm 0.7	10.1 \pm 0.1	10.5 \pm 0.7	10.5 \pm 0.7
20	20.5 \pm 0.7	20.5 \pm 0.7	20.4 \pm 0.6	20.5 \pm 0.7	20.5 \pm 0.7
30	30.8 \pm 0.3	30.6 \pm 0.6	30.5 \pm 0.7	31.0 \pm 0.0	30.7 \pm 0.4
40	41.0 \pm 0.0	41.0 \pm 0.0	40.6 \pm 0.5	41.0 \pm 0.0	40.9 \pm 0.2
50	51.0 \pm 0.0	51.0 \pm 0.0	50.9 \pm 0.1	51.0 \pm 0.0	51.0 \pm 0.0
60	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.0
70	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0
80	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0
90	90.5 \pm 0.7	90.5 \pm 0.7	90.5 \pm 0.7	90.5 \pm 0.7	90.5 \pm 0.7
100	100.5 \pm 0.7	100.5 \pm 0.7	100.4 \pm 0.5	100.5 \pm 0.7	100.5 \pm 0.7
110	110.5 \pm 0.7	110.4 \pm 0.6	110.1 \pm 0.1	110.5 \pm 0.7	110.4 \pm 0.6
120	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0
130	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0
140	140.0 \pm 0.0	140.0 \pm 0.0	140.0 \pm 0.0	140.0 \pm 0.0	140.0 \pm 0.0
150	150.0 \pm 0.0	150.0 \pm 0.1	150.0 \pm 0.0	150.2 \pm 0.3	150.0 \pm 0.0
160	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0	159.7 \pm 0.4
170	170.0 \pm 0.0	170.2 \pm 0.3	169.8 \pm 0.3	170.5 \pm 0.7	169.5 \pm 0.7
180	180.2 \pm 0.3	180.4 \pm 0.5	180.2 \pm 0.3	180.4 \pm 0.6	180.0 \pm 0.0
190	189.6 \pm 0.5	190.0 \pm 0.0	189.9 \pm 0.2	190.0 \pm 0.0	189.7 \pm 0.5
200	200.0 \pm 0.0	200.0 \pm 0.0	199.9 \pm 0.1	200.0 \pm 0.0	199.6 \pm 0.6
190	189.5 \pm 0.7	190.1 \pm 0.0	189.9 \pm 0.1	190.1 \pm 0.1	189.5 \pm 0.7
180	180.0 \pm 0.0	180.2 \pm 0.2	180.0 \pm 0.0	180.2 \pm 0.4	180.0 \pm 0.0
170	170.0 \pm 0.0	170.0 \pm 0.0	169.7 \pm 0.4	170.4 \pm 0.5	169.5 \pm 0.7
160	160.0 \pm 0.0	160.0 \pm 0.0	159.8 \pm 0.4	160.0 \pm 0.0	159.6 \pm 0.5
150	150.1 \pm 0.0	150.0 \pm 0.0	150.0 \pm 0.0	150.1 \pm 0.1	150.0 \pm 0.0
140	140.0 \pm 0.0	140.0 \pm 0.0	140.0 \pm 0.0	140.0 \pm 0.0	140.0 \pm 0.0
130	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0
120	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.1 \pm 0.1	120.0 \pm 0.0
110	110.5 \pm 0.7	110.5 \pm 0.7	110.0 \pm 0.0	110.5 \pm 0.7	110.1 \pm 0.2
100	100.5 \pm 0.7	100.5 \pm 0.7	100.1 \pm 0.1	100.5 \pm 0.7	100.4 \pm 0.6
90	90.5 \pm 0.7	90.6 \pm 0.8	90.5 \pm 0.7	90.6 \pm 0.8	90.2 \pm 0.3
80	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0
70	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0
60	60.0 \pm 0.0	60.0 \pm 0.0	59.9 \pm 0.1	60.0 \pm 0.0	60.0 \pm 0.0
50	51.0 \pm 0.0	51.0 \pm 0.0	50.9 \pm 0.1	51.0 \pm 0.0	51.0 \pm 0.1
40	41.0 \pm 0.0	40.9 \pm 0.1	40.5 \pm 0.7	40.9 \pm 0.1	40.8 \pm 0.3
30	30.8 \pm 0.2	30.7 \pm 0.4	30.4 \pm 0.6	30.8 \pm 0.2	30.8 \pm 0.3
20	20.5 \pm 0.7	20.6 \pm 0.5	20.2 \pm 0.3	20.5 \pm 0.6	20.3 \pm 0.4
10	10.5 \pm 0.7	10.5 \pm 0.7	10.3 \pm 0.4	10.4 \pm 0.6	10.3 \pm 0.5

Depth Accuracy Summary Statistics (cont'd)

Table C-2. Average depth \pm S.D. for data loggers dived on two trials to 200 fsw with holds at each decade of depth during descent and ascent. Actual depth is in column one. The DL serial numbers comprise the remaining column headings. All depths are in fsw.

Depth	S-28770	S-28771	S-28772	S-28773	S-28774
10	10.4 \pm 0.6	10.5 \pm 0.7	10.5 \pm 0.7	10.1 \pm 0.1	10.4 \pm 0.6
20	20.5 \pm 0.7	20.5 \pm 0.7	20.5 \pm 0.7	20.5 \pm 0.7	20.4 \pm 0.6
30	30.6 \pm 0.6	30.8 \pm 0.2	30.9 \pm 0.1	30.9 \pm 0.1	30.5 \pm 0.7
40	40.8 \pm 0.2	41.0 \pm 0.0	41.0 \pm 0.0	41.0 \pm 0.0	41.0 \pm 0.0
50	50.9 \pm 0.1	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0
60	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.0
70	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0
80	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0
90	90.5 \pm 0.7	90.6 \pm 0.6	90.5 \pm 0.7	90.5 \pm 0.7	90.5 \pm 0.7
100	100.5 \pm 0.7	100.5 \pm 0.7	100.5 \pm 0.7	100.5 \pm 0.7	100.5 \pm 0.7
110	110.5 \pm 0.7	110.5 \pm 0.7	110.5 \pm 0.7	110.5 \pm 0.7	110.4 \pm 0.6
120	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0
130	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0
140	140.0 \pm 0.0	140.0 \pm 0.0	140.1 \pm 0.1	140.0 \pm 0.0	140.0 \pm 0.0
150	150.0 \pm 0.0	150.2 \pm 0.3	150.2 \pm 0.4	150.2 \pm 0.3	150.0 \pm 0.0
160	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0
170	170.0 \pm 0.0	170.5 \pm 0.7	170.5 \pm 0.7	170.0 \pm 0.0	170.4 \pm 0.6
180	180.0 \pm 0.0	180.5 \pm 0.7	180.5 \pm 0.7	180.4 \pm 0.6	180.1 \pm 0.2
190	189.8 \pm 0.3	190.0 \pm 0.0	190.0 \pm 0.0	190.0 \pm 0.0	190.0 \pm 0.0
200	200.0 \pm 0.0	200.0 \pm 0.0	200.0 \pm 0.0	200.0 \pm 0.0	200.0 \pm 0.0
190	189.7 \pm 0.5	190.0 \pm 0.0	190.0 \pm 0.0	190.0 \pm 0.0	189.8 \pm 0.2
180	180.0 \pm 0.0	180.6 \pm 0.6	180.2 \pm 0.3	180.3 \pm 0.4	180.0 \pm 0.0
170	170.0 \pm 0.0	170.5 \pm 0.7	170.1 \pm 0.3	170.0 \pm 0.0	170.1 \pm 0.2
160	159.7 \pm 0.4	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0
150	150.0 \pm 0.0	150.3 \pm 0.4	150.1 \pm 0.0	150.1 \pm 0.1	150.0 \pm 0.0
140	140.1 \pm 0.1	140.0 \pm 0.0	140.0 \pm 0.0	140.0 \pm 0.0	140.1 \pm 0.1
130	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0
120	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0
110	110.5 \pm 0.7	110.5 \pm 0.7	110.5 \pm 0.7	110.5 \pm 0.7	110.5 \pm 0.7
100	100.5 \pm 0.7	100.5 \pm 0.7	100.5 \pm 0.7	100.5 \pm 0.7	100.5 \pm 0.7
90	90.5 \pm 0.7	90.5 \pm 0.7	90.5 \pm 0.7	90.5 \pm 0.7	90.5 \pm 0.7
80	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0
70	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0
60	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.0
50	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0	50.9 \pm 0.1
40	40.9 \pm 0.1	40.9 \pm 0.0	41.0 \pm 0.0	41.0 \pm 0.0	40.9 \pm 0.2
30	30.5 \pm 0.7	30.8 \pm 0.3	31.0 \pm 0.0	30.7 \pm 0.4	30.5 \pm 0.7
20	20.5 \pm 0.7	20.5 \pm 0.7	20.6 \pm 0.5	20.5 \pm 0.7	20.3 \pm 0.5
10	10.4 \pm 0.6	10.4 \pm 0.6	10.4 \pm 0.6	10.4 \pm 0.5	10.4 \pm 0.5

Depth Accuracy Summary Statistics (cont'd)

Table C-3. Average depth \pm S.D. for data loggers dived on two trials to 200 fsw with holds at each decade of depth during descent and ascent. Actual depth is in column one. The DL serial numbers comprise the remaining column headings. All depths are in fsw.

Depth	S-38682	S-38687	S-38692	S-38695	S-38696
10	10.5 \pm 0.7	10.5 \pm 0.7	10.4 \pm 0.6	10.5 \pm 0.7	10.5 \pm 0.7
20	20.9 \pm 0.1	20.5 \pm 0.7	20.5 \pm 0.7	20.6 \pm 0.6	20.5 \pm 0.7
30	31.0 \pm 0.0	30.9 \pm 0.2	30.7 \pm 0.5	31.0 \pm 0.0	31.0 \pm 0.0
40	41.0 \pm 0.0	41.0 \pm 0.0	41.0 \pm 0.0	41.0 \pm 0.0	41.0 \pm 0.0
50	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0
60	60.0 \pm 0.0	60.0 \pm 0.0	60.3 \pm 0.5	60.0 \pm 0.0	60.0 \pm 0.0
70	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0
80	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0
90	90.7 \pm 0.4	90.5 \pm 0.7	90.7 \pm 0.5	90.5 \pm 0.7	90.5 \pm 0.7
100	100.7 \pm 0.4	100.5 \pm 0.7	100.7 \pm 0.4	100.5 \pm 0.7	100.5 \pm 0.7
110	110.5 \pm 0.7	110.5 \pm 0.7	110.6 \pm 0.5	110.5 \pm 0.7	110.5 \pm 0.7
120	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0
130	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0
140	140.0 \pm 0.0	140.0 \pm 0.0	140.1 \pm 0.2	140.0 \pm 0.0	140.0 \pm 0.0
150	150.0 \pm 0.0	150.0 \pm 0.0	150.4 \pm 0.6	150.0 \pm 0.0	150.0 \pm 0.1
160	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0
170	170.4 \pm 0.5	170.1 \pm 0.2	170.5 \pm 0.7	170.5 \pm 0.7	170.5 \pm 0.7
180	180.5 \pm 0.7	180.2 \pm 0.3	180.5 \pm 0.7	180.5 \pm 0.7	180.5 \pm 0.7
190	190.0 \pm 0.0	190.0 \pm 0.0	190.0 \pm 0.0	190.0 \pm 0.0	190.0 \pm 0.0
200	200.0 \pm 0.0	200.0 \pm 0.0	200.0 \pm 0.0	200.0 \pm 0.0	200.0 \pm 0.0
190	190.0 \pm 0.0	190.0 \pm 0.0	190.0 \pm 0.0	190.0 \pm 0.0	190.0 \pm 0.0
180	180.5 \pm 0.7	180.2 \pm 0.3	180.5 \pm 0.7	180.2 \pm 0.3	180.5 \pm 0.7
170	170.4 \pm 0.6	169.9 \pm 0.1	170.6 \pm 0.7	170.1 \pm 0.2	170.5 \pm 0.7
160	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0
150	150.1 \pm 0.1	150.0 \pm 0.0	150.5 \pm 0.7	150.1 \pm 0.1	150.4 \pm 0.6
140	140.1 \pm 0.1	140.2 \pm 0.2	140.4 \pm 0.6	140.0 \pm 0.0	140.3 \pm 0.4
130	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0	130.1 \pm 0.1	130.1 \pm 0.1
120	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0
110	110.5 \pm 0.7	110.5 \pm 0.7	110.5 \pm 0.7	110.5 \pm 0.7	110.5 \pm 0.7
100	100.6 \pm 0.6	100.5 \pm 0.7	100.5 \pm 0.7	100.5 \pm 0.7	100.7 \pm 0.4
90	90.5 \pm 0.7	90.5 \pm 0.7	90.5 \pm 0.7	90.5 \pm 0.7	90.7 \pm 0.4
80	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.1 \pm 0.1	81.0 \pm 0.0
70	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0
60	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.0
50	51.0 \pm 0.0	50.9 \pm 0.1	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0
40	41.0 \pm 0.0	41.1 \pm 0.1	41.0 \pm 0.0	41.0 \pm 0.0	41.0 \pm 0.0
30	30.8 \pm 0.2	30.8 \pm 0.2	30.6 \pm 0.6	30.8 \pm 0.3	30.9 \pm 0.1
20	20.8 \pm 0.4	20.5 \pm 0.7	20.5 \pm 0.7	20.4 \pm 0.6	20.5 \pm 0.6
10	10.4 \pm 0.6	10.4 \pm 0.5	10.4 \pm 0.5	10.3 \pm 0.5	10.5 \pm 0.7

Depth Accuracy Summary Statistics (cont'd)

Table C-4. Average depth \pm S.D. for data loggers dived on two trials to 200 fsw with holds at each decade of depth during descent and ascent. Actual depth is in column one. The DL serial numbers comprise the remaining column headings. All depths are in fsw.

Depth	S-38697	S-38699	S-38704	S-38707	S-38716
10	10.3 \pm 0.5	10.4 \pm 0.6	10.5 \pm 0.7	10.7 \pm 0.4	10.5 \pm 0.7
20	20.2 \pm 0.3	20.5 \pm 0.7	20.7 \pm 0.5	20.6 \pm 0.5	20.5 \pm 0.7
30	30.5 \pm 0.7	30.8 \pm 0.3	31.0 \pm 0.0	31.0 \pm 0.0	30.6 \pm 0.6
40	40.6 \pm 0.6	41.0 \pm 0.0	41.0 \pm 0.0	41.0 \pm 0.0	41.0 \pm 0.0
50	50.8 \pm 0.3	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0
60	60.0 \pm 0.0	60.0 \pm 0.0	60.4 \pm 0.5	60.5 \pm 0.7	60.0 \pm 0.0
70	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0
80	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0
90	90.0 \pm 0.0	90.5 \pm 0.7	90.9 \pm 0.2	90.5 \pm 0.7	90.5 \pm 0.7
100	100.0 \pm 0.0	100.5 \pm 0.6	100.9 \pm 0.1	100.5 \pm 0.7	100.5 \pm 0.7
110	110.0 \pm 0.0	110.6 \pm 0.5	110.6 \pm 0.6	110.5 \pm 0.7	110.5 \pm 0.7
120	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0
130	130.0 \pm 0.0	130.0 \pm 0.0	130.2 \pm 0.3	130.0 \pm 0.0	130.0 \pm 0.0
140	140.0 \pm 0.0	140.5 \pm 0.7	140.5 \pm 0.7	140.5 \pm 0.7	140.0 \pm 0.0
150	150.0 \pm 0.0	150.3 \pm 0.4	150.5 \pm 0.7	150.2 \pm 0.3	150.0 \pm 0.0
160	159.5 \pm 0.7	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0
170	169.5 \pm 0.7	170.5 \pm 0.7	170.5 \pm 0.7	170.5 \pm 0.7	170.2 \pm 0.5
180	180.0 \pm 0.0	180.5 \pm 0.7	180.6 \pm 0.6	180.5 \pm 0.7	180.4 \pm 0.6
190	189.5 \pm 0.7	190.0 \pm 0.0	190.0 \pm 0.0	190.0 \pm 0.0	190.0 \pm 0.0
200	199.5 \pm 0.7	200.0 \pm 0.0	200.0 \pm 0.0	200.0 \pm 0.0	200.0 \pm 0.0
190	189.5 \pm 0.7	190.0 \pm 0.0	190.0 \pm 0.0	190.1 \pm 0.1	190.0 \pm 0.0
180	180.0 \pm 0.0	180.5 \pm 0.7	180.5 \pm 0.7	180.5 \pm 0.7	180.1 \pm 0.1
170	169.4 \pm 0.6	170.5 \pm 0.7	170.5 \pm 0.7	170.5 \pm 0.7	169.9 \pm 0.2
160	159.5 \pm 0.7	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0	159.9 \pm 0.2
150	150.0 \pm 0.0	150.1 \pm 0.2	150.5 \pm 0.7	150.0 \pm 0.0	150.0 \pm 0.0
140	140.0 \pm 0.0	140.1 \pm 0.1	140.5 \pm 0.7	140.1 \pm 0.2	140.0 \pm 0.0
130	130.0 \pm 0.0	130.1 \pm 0.1	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0
120	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0
110	110.0 \pm 0.0	110.5 \pm 0.7	110.5 \pm 0.7	110.5 \pm 0.7	110.5 \pm 0.7
100	100.0 \pm 0.0	100.5 \pm 0.7	100.8 \pm 0.3	100.7 \pm 0.4	100.5 \pm 0.7
90	90.0 \pm 0.0	90.5 \pm 0.7	90.8 \pm 0.3	90.5 \pm 0.7	90.5 \pm 0.7
80	80.9 \pm 0.1	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0
70	70.8 \pm 0.2	71.0 \pm 0.0	71.0 \pm 0.0	71.1 \pm 0.1	71.0 \pm 0.0
60	60.0 \pm 0.0	60.0 \pm 0.0	60.2 \pm 0.2	60.0 \pm 0.0	60.0 \pm 0.0
50	50.5 \pm 0.7	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0	50.9 \pm 0.1
40	40.6 \pm 0.6	40.9 \pm 0.1	41.1 \pm 0.1	41.0 \pm 0.0	40.9 \pm 0.2
30	30.4 \pm 0.6	30.5 \pm 0.7	30.9 \pm 0.2	31.0 \pm 0.0	30.5 \pm 0.7
20	20.2 \pm 0.2	20.3 \pm 0.5	20.6 \pm 0.5	20.7 \pm 0.4	20.3 \pm 0.4
10	10.3 \pm 0.4	10.7 \pm NaN	10.6 \pm 0.8	10.4 \pm 0.6	10.3 \pm 0.5

Depth Accuracy Summary Statistics (cont'd)

Table C-5. Average depth \pm S.D. for data loggers dived on two trials to 200 fsw with holds at each decade of depth during descent and ascent. Actual depth is in column one. The DL serial numbers comprise the remaining column headings. All depths are in fsw.

Depth	S-38719	S-38727	S-38730	S-38733	S-38734
10	10.5 \pm 0.7	10.5 \pm 0.7	10.5 \pm 0.7	10.0 \pm 0.0	10.6 \pm 0.6
20	20.5 \pm 0.7	20.5 \pm 0.7	20.5 \pm 0.7	20.5 \pm 0.7	21.0 \pm 0.0
30	30.9 \pm 0.1	31.0 \pm 0.0	30.6 \pm 0.6	30.8 \pm 0.3	31.0 \pm 0.0
40	41.0 \pm 0.0	41.0 \pm 0.0	40.9 \pm 0.2	40.7 \pm 0.5	41.0 \pm 0.0
50	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0	50.9 \pm 0.1	51.0 \pm 0.0
60	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.0	60.2 \pm 0.2
70	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0
80	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0
90	90.5 \pm 0.7	90.6 \pm 0.6	90.5 \pm 0.7	90.5 \pm 0.7	90.8 \pm 0.3
100	100.7 \pm 0.4	100.6 \pm 0.6	100.5 \pm 0.7	100.4 \pm 0.5	100.9 \pm 0.2
110	110.5 \pm 0.7	110.5 \pm 0.7	110.5 \pm 0.7	110.4 \pm 0.6	110.6 \pm 0.6
120	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0
130	130.0 \pm 0.0	130.1 \pm 0.1	130.0 \pm 0.0	130.0 \pm 0.0	130.2 \pm 0.2
140	140.5 \pm 0.7	140.2 \pm 0.3	140.1 \pm 0.1	140.0 \pm 0.0	140.3 \pm 0.5
150	150.5 \pm 0.7	150.5 \pm 0.7	150.3 \pm 0.4	150.0 \pm 0.0	150.5 \pm 0.7
160	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0	159.8 \pm 0.3	160.0 \pm 0.0
170	170.5 \pm 0.7	170.5 \pm 0.7	170.5 \pm 0.7	169.8 \pm 0.2	170.5 \pm 0.7
180	180.5 \pm 0.7	180.5 \pm 0.7	180.5 \pm 0.7	180.0 \pm 0.0	180.5 \pm 0.7
190	190.0 \pm 0.0	190.0 \pm 0.0	190.0 \pm 0.0	189.6 \pm 0.5	190.0 \pm 0.0
200	200.2 \pm 0.3	200.0 \pm 0.0	200.0 \pm 0.0	200.0 \pm 0.0	200.0 \pm 0.0
190	190.0 \pm 0.0	190.0 \pm 0.0	190.0 \pm 0.0	189.5 \pm 0.7	190.0 \pm 0.0
180	180.5 \pm 0.7	180.5 \pm 0.7	180.3 \pm 0.5	180.1 \pm 0.1	180.5 \pm 0.7
170	170.5 \pm 0.7	170.6 \pm 0.6	170.5 \pm 0.7	169.7 \pm 0.5	170.5 \pm 0.7
160	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0	159.7 \pm 0.5	160.0 \pm 0.0
150	150.5 \pm 0.7	150.2 \pm 0.3	150.1 \pm 0.1	150.0 \pm 0.0	150.5 \pm 0.7
140	140.2 \pm 0.3	140.0 \pm 0.0	140.1 \pm 0.1	140.1 \pm 0.1	140.5 \pm 0.7
130	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0
120	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0
110	110.5 \pm 0.7	110.5 \pm 0.7	110.5 \pm 0.7	110.2 \pm 0.1	110.5 \pm 0.7
100	100.6 \pm 0.5	100.6 \pm 0.5	100.5 \pm 0.7	100.5 \pm 0.7	100.9 \pm 0.2
90	90.5 \pm 0.7	90.5 \pm 0.7	90.5 \pm 0.7	90.5 \pm 0.7	90.8 \pm 0.3
80	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0
70	71.0 \pm 0.0	71.1 \pm 0.1	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0
60	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.0	60.4 \pm 0.6
50	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0	50.7 \pm 0.4	51.0 \pm 0.0
40	41.0 \pm 0.0	41.0 \pm 0.0	40.8 \pm 0.3	40.5 \pm 0.7	41.0 \pm 0.0
30	30.8 \pm 0.3	30.9 \pm 0.1	30.7 \pm 0.5	30.7 \pm 0.4	31.0 \pm 0.0
20	20.4 \pm 0.6	20.6 \pm 0.5	20.3 \pm 0.4	20.4 \pm 0.6	20.9 \pm 0.1
10	10.4 \pm 0.5	10.4 \pm 0.6	10.4 \pm 0.5	10.0 \pm 0.0	10.5 \pm 0.7

Depth Accuracy Summary Statistics (cont'd)

Table C-6. Average depth \pm S.D. for data loggers dived on two trials to 200 fsw with holds at each decade of depth during descent and ascent. Actual depth is in column one. The DL serial numbers comprise the remaining column headings. All depths are in fsw.

Depth	S-38738	S-38740	S-38748	S-38749	S-38753
10	10.5 \pm 0.7	10.7 \pm 0.5	10.5 \pm 0.7	10.5 \pm 0.7	10.5 \pm 0.7
20	21.0 \pm 0.0	20.9 \pm 0.1	20.6 \pm 0.5	20.5 \pm 0.7	20.5 \pm 0.7
30	31.0 \pm 0.0	31.0 \pm 0.0	30.7 \pm 0.5	31.0 \pm 0.0	30.9 \pm 0.2
40	41.0 \pm 0.0	41.0 \pm 0.0	41.0 \pm 0.0	41.0 \pm 0.0	41.0 \pm 0.0
50	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0
60	60.3 \pm 0.4	60.1 \pm 0.2	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.0
70	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0
80	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0
90	90.5 \pm 0.7	90.5 \pm 0.7	90.5 \pm 0.7	90.5 \pm 0.7	90.5 \pm 0.7
100	100.5 \pm 0.7	100.5 \pm 0.7	100.5 \pm 0.7	100.5 \pm 0.7	100.5 \pm 0.7
110	110.5 \pm 0.7	110.5 \pm 0.7	110.5 \pm 0.7	110.5 \pm 0.7	110.2 \pm 0.3
120	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0
130	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0
140	140.4 \pm 0.5	140.0 \pm 0.0	140.0 \pm 0.0	140.0 \pm 0.0	140.0 \pm 0.0
150	150.3 \pm 0.4	150.1 \pm 0.1	150.2 \pm 0.3	150.0 \pm 0.0	150.0 \pm 0.0
160	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0
170	170.5 \pm 0.7	170.4 \pm 0.5	170.5 \pm 0.7	170.1 \pm 0.1	169.7 \pm 0.4
180	180.5 \pm 0.7	180.5 \pm 0.7	180.5 \pm 0.7	180.3 \pm 0.5	180.1 \pm 0.1
190	190.0 \pm 0.0	190.0 \pm 0.0	190.0 \pm 0.0	190.0 \pm 0.0	190.0 \pm 0.0
200	200.0 \pm 0.0	200.0 \pm 0.0	200.0 \pm 0.0	200.0 \pm 0.0	199.7 \pm 0.5
190	190.1 \pm 0.1	190.1 \pm 0.1	190.0 \pm 0.0	190.0 \pm 0.0	189.8 \pm 0.2
180	180.5 \pm 0.7	180.5 \pm 0.7	180.4 \pm 0.5	180.0 \pm 0.0	180.1 \pm 0.1
170	170.5 \pm 0.6	170.4 \pm 0.6	170.5 \pm 0.7	170.0 \pm 0.0	169.6 \pm 0.6
160	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0	160.0 \pm 0.0	159.6 \pm 0.6
150	150.2 \pm 0.3	150.2 \pm 0.3	150.0 \pm 0.0	150.0 \pm 0.0	150.0 \pm 0.0
140	140.3 \pm 0.5	140.0 \pm 0.0	140.0 \pm 0.0	140.0 \pm 0.0	140.1 \pm 0.1
130	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0	130.0 \pm 0.0
120	120.1 \pm 0.1	120.1 \pm 0.1	120.0 \pm 0.0	120.0 \pm 0.0	120.0 \pm 0.0
110	110.5 \pm 0.7	110.5 \pm 0.7	110.5 \pm 0.7	110.5 \pm 0.7	110.5 \pm 0.7
100	100.7 \pm 0.5	100.5 \pm 0.7	100.5 \pm 0.7	100.5 \pm 0.7	100.5 \pm 0.7
90	90.6 \pm 0.6	90.5 \pm 0.7	90.5 \pm 0.7	90.5 \pm 0.7	90.5 \pm 0.7
80	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0	81.0 \pm 0.0
70	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0	71.0 \pm 0.0
60	60.0 \pm 0.0	60.1 \pm 0.1	60.0 \pm 0.0	60.0 \pm 0.0	60.0 \pm 0.0
50	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0	51.0 \pm 0.0
40	41.0 \pm 0.0	41.0 \pm 0.0	40.9 \pm 0.2	41.0 \pm 0.0	41.1 \pm 0.1
30	30.9 \pm 0.2	30.9 \pm 0.1	30.5 \pm 0.7	30.8 \pm 0.2	30.9 \pm 0.4
20	20.5 \pm 0.7	20.7 \pm 0.4	20.5 \pm 0.7	20.4 \pm 0.6	20.4 \pm 0.6
10	10.4 \pm 0.6	10.6 \pm 0.6	10.4 \pm 0.6	10.5 \pm 0.7	10.4 \pm 0.6

APPENDIX D

STOP DEPTH SEGMENT SELECTION

Before determining the average depth reading at a stop depth by a data logger (DL), one must first determine where/when in the profile that the DL is at the stop depth. (The portion of the depth profile at the stop depth will be called the stop depth segment.) Ideally, one could match the clock time used by the test chamber control system with the DL logged time to compare the DL-recorded depth with that of the test chamber control system. However, the DLs typically begin logging after some depth is attained during the dive, and so while zero time for the test chamber system occurs at 0 depth, zero time for the DL occurs sometime later during the dive. Also, often the depth control system and DL are logging data at different rates.

In addition, the test chamber system is a real, not theoretical, control system, and so it does not make exact critically damped depth changes. As a result, there is often some mild blunting of the pressure curve as the chamber depth approaches the specified depth.

Due to the reasons above, the decision was made to use the DL depth profile itself to determine when it was at a stop depth. This required the assumption that the DL would exhibit a stable depth at the stop depth and would demonstrate changes in depth when the chamber depth actually changed. This is a reasonable assumption which if invalid, would be evident by the non-uniform intervals between the stop depths, and the non-uniform intervals of the stop depths themselves. Additionally, the stop times at 50, 100, 150, and 200 fsw are twice as long as the stop times at the other depths, and this information can also be used to validate the stop depth selection method used.

In the author's experience, the human eye is really quite good in selecting stop depth durations. However, with 22 DLs, each having 39 depth stops for each of two runs, there were a total of 1,716 depth segment determinations required. Working at 99% efficiency, one would still be expected to make over 17 determination errors. In practice, transcription errors would be expected to drastically increase the error rate. In addition, the human eye selection process can be quite subjective, and always subject to criticism. Therefore, a more objective, automated process was desired.

Since the analyses were being performed in S-Plus, that language was used to craft a stop depth segment selection routine. After some experimentation, the following S-Plus function was created and used to determine the beginning and ending of each stop depth as determined by each data logger (DL).

In S-Plus, comments are preceded by a "#" character. Vectors are one-dimensional arrays whose indices are enclosed in braces "[]". Variable assignments use "<=" versus "=" generally. Vector and matrix algebra are allowed.

```

fctGetCutSegs <- function(Time, Depth, subset=(1:length(Depth)), IncludeData=T,
Plot=F) {
  # Takes two vectors y=depth, and x=time, and calculates the segments
  # returning the start and stop points in a list. The x and y may be
  # subsetted, but remember that the points returned will be referenced
  # to x and y subsetted. Thus if subset=c(200:300), the
  # indices (for the start/stop points) will have values between 0:100 and
  # not 200-300.
  # If Plot = T then a quick plot with the segment cuts is shown.
  # The returned list contains as a minimum: the Segment Start and Stop indices
  # into the subsetted data vectors x & y.
  # If IncludeData = T then the list also contains the subsetted x and y, and
  # the subset vector, subset.
  # This seems to work OK with the Nov 02 Sensus data.
  # The routine always assumes a constant time interval between depth values.

  # Create subsetted vars.
  y <- Depth[subset]
  x <- Time[subset]
  # Forward difference. d1[i] = y[i+1] - y[i].
  # Length is one less than length of y vector.
  d1 <- diff(y,1)
  # Forward difference. d2[i] = y[i+2] - y[i].
  # Length is two less than length of y vector.
  d2 <- diff(y,2)
  # Boolean vector defined as follows.
  # Big enough differences between depths at point i will be T, and
  # points in flat regions will be F.
  # Since d2 length is one shorter than d1, adjust d1 so they have the
  # same length.
  b12 <- abs(d1[-1] + d2) >2
  bnew <- b12
  # If descent/ascent is not smooth, then may have a point or
  # two that doesn't meet the above criteria. Also, the routine does
  # not identify the stopping point of the segment as cleanly as desired.
  # Therefore, assign as true two points following every already-true point.
  # This is a quick hack.
  for(i in 1:(length(b12)-2)) {
    if (b12[i]) {
      # then the next are forced to also be true. Kinda overkill.
      bnew[i+1] <- T
      bnew[i+2] <- T
    }
  }
  # Use diff() to look for transitions between T and F.
  # Looking at vector in ascending order (y[2] comes before y[3]),
  # and knowing that T as a number is 1; F as a number is 0:
  # T-to-F transition = -1 (F-T = 0 - 1 = -1 ) remember y[i+1]- y[i]
  # F-to-T transition = 1 (T-F = 1 - 0 = 1 )
  # T-to-T transition = 0 (T-F = 1 - 1 = 0 )
  # F-to-F transition = 0 (T-F = 0 - 0 = 0 )
  diffbnew <- diff(bnew)
  # Start of a flat segment will occur around a T-to-F transition.
  SegStart <- (1:(length(bnew)-1))[diffbnew == -1]
  # The end (stop point) of a flat segment will occur around a
  # F-to-T transition.
  # Shift the stop one point to the right.
  SegStop <- (2:length(bnew))[diffbnew == 1]

```

```

# Need to adjust if first stop comes before first start.
if(SegStart[1]>SegStop[1]) {
  SegStop <- SegStop[-1]
}
# Should also check if have an extra start at the end and remove it if
# no followup stop.
if(length(SegStart)>length(SegStop)) {
  SegStart <- SegStart[-length(SegStart)]
}

if(Plot) {
  # Do a quickie plot if desired.
  plot(x,y)
  # Print start of the calculated segments as a vertical line in green.
  abline(v=x[SegStart], col=4)
  # Print end of calculated segments as a vertical line in red.
  abline(v=x[SegStop], col=3)
}

# Define the result to be returned.
if(IncludeData) {
  tmp1ist <- list(SegStart=SegStart, SegStop=SegStop, Time=x, Depth=y,
subset=subset)
} else {
  tmp1ist <- list(SegStart=SegStart, SegStop=SegStop)
}

# Return the list.
tmp1ist
}

```